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Address

THE ESSENTIALS OF SUCCESSFUL PUBLIC HEALTH ADMINISTRATION.*

A. C. ABBOTT, M.D.

Chief of the Bureau of Health,

PHILADELPHIA.

At the present time nothing can be more appropriate than a discussion of certain modern views concerning public health administration and the auxiliary factors that go to make such administration a success. While the problem of public preventive medicine would, *a priori*, seem to be easily soluble through the employment of well-established principles, it is found by actual experience to be beset with difficulties, many of which would not exist were there a more intimate acquaintance, on the part of all concerned, with the requirements of the work.

PLEA FOR PROFESSIONAL CO-OPERATION.

With an audience of this character it is perfectly warrantable to assume that success in public health work is not only desirable, but actually demanded, and to expect, therefore, from each individual such co-operation as lies within his power to give. Proceeding on that assumption, it is my purpose to indicate in the course of these remarks the manner in which I believe this demand may best be met.

It is an unfortunate fact that many physicians, as well as laymen, regard the problem of public preventive medicine as soluble through the inscription on the statute books of specific laws, and the appointment of boards whose duties it shall be to see that such statutory regulations are enforced. As a matter of fact, such a combination represents only the nucleus about which are assembled the various accessories that together constitute the machinery which, according to the perfection of its organization and the smoothness of its running, promises success or failure to the undertaking.

You have only to reflect for a moment on the objects and aims of public health organizations to realize the impossibility of progress when the hands of those responsible for administration are tied by inflexible laws on specific topics, and when the only assistance available for the correct conduct of the work is that officially supplied. You have only to consider the manifold ramifications of the problem to realize how impossible it would be for any community to secure and support a corps capable of collecting all the data essential to a full understanding of prevailing conditions. Yet the collection of such data is of fundamental importance to the accurate performance of the duties for which the authorities are held responsible. In what manner, then, is the deficiency met? It is met by pressing into service those of the community who, by virtue of their calling, possess the knowledge needed by the authorities, i. e., by requesting the medical profession to co-operate to the extent of prompt notification of all matters bearing on the public health that come to their notice in the course of the day's work.

It may never have occurred to you that, as practitioners of medicine, you are in affiliation with a department of health. It is true your names do not appear on the list of municipal employés, and there are no monetary compensations reaching you at fixed periods as agreeable reminders, but you are, nevertheless, a part—a most important part—of that branch of the administration, and have been so since the date of your registration as practitioners in this commonwealth. In evidence thereof you have supplied to the authorities information of vital importance to the detection and isolation of dangerous diseases; you have given to them substantial support in efforts to enforce regulations aiming to eliminate such diseases, and by your example and precept you have helped in bringing the public to understand and appreciate that the concerted action of yourselves and your colleagues in authority is always for the best interests of the many, even though at times it may seem to bear hard on the individual.

I anticipate no dissenting voice when I say that the most important ally of the public health authorities is the medical profession, nor do I fear contradiction when I maintain that allegiance is of the highest value only when willingly given for intelligent reasons.

NEED OF DISCRETIONARY POWER.

Such being the case, the importance of a clear mutual understanding of the objects and desires of the several arms of this organization becomes at once apparent.

The arbitrary enforcement of cut-and-dried regulations, many of which are obsolete and unsuited to modern demands, by individuals not trained for the service, unacquainted with the advances in preventive medicine, devoid of sympathetic interest in the evolution of medical ideals, and consequently lacking in public and professional confidence, has led too often to an estrangement between the body in authority and those from whom it should receive support, with a result, needless to say, that is fatal to everything in the way of progressive administration.

When we contemplate the rapid advances in knowledge on the manifold phases of disease we are at once impressed with the fact that, excepting such statutory regulations as are of the most general and basic nature, none that can be enacted are likely to prove of permanent service. Some must be revised to meet the modern demands and new ones formulated adaptable to unexpected contingencies. The framing of such rules and regulations as shall be based on common sense, harmonious with scientific requirements and in accord with established sanitary precepts, falls, as a rule, on those

* Delivered before the Philadelphia County Medical Society.

responsible for their administration, but they are rash men who will undertake this task without the support of those who see intimately and constantly many phases of the subject that they, by reason of circumstances, can view only from a distance.

A limited practical experience with public health matters has convinced me that, where a close and intelligent co-operation between the medical profession and the body in authority exists, the interests of the community are best served by giving to those in authority absolute power and by holding them rigidly accountable for the judicious exercise of such power. This may seem a startling proposition, but I can assure you that it is not made without due reflection, nor without discouraging experiences with specific, inelastic statutes unsuitable to newer conditions, but unchangeable without special legislative action.

The regulations formulated by the body in authority should have the force of laws, and it should be possible promptly to amend, modify or repeal them as conditions dictate.

Powers of that magnitude are of advantage in several ways, viz., the enormous responsibilities thus thrust on the authorities insure the utmost care in the framing of regulations; the abuse of such power reacts directly on those misusing it, and its possession by competent individuals permits of the framing of new and the revision or repeal of old regulations as the occasion warrants without the doubt and delay incidental to legislative deliberation.

This idea is not altogether new. In many particulars the original laws creating boards of health and quarantine boards gave to them general powers that are almost plenary, and I am not sure but that in a court of final appeal that power would be found to extend much further than would appear from the casual reading of those laws. However, as there may be some doubt as to the scope of the power conferred by the original laws, as subsequent laws only harmonized with the knowledge existing at the time of their enactment, and as the modern problem of public health, like all other medical problems of the day, assumes more or less of a new aspect with each advance in our acquaintance with disease, it seems wise to make provisions whereby laws may be promptly repealed, amended or otherwise modified to meet the needs of the ever changing subject comprehended by them.

CONDITIONS IN PHILADELPHIA.

When those at present responsible for the administration of public health matters in this city took office they were fully sensible of the responsibilities that were assumed, but were correspondingly ignorant of their powers to carry into effect certain propositions that were regarded both by themselves and their medical advisers as of fundamental importance to the successful and comprehensive performance of their duties.

An examination of the statute books revealed the existence of many excellent laws, some of them as good as could have been formulated at the time, but practically all of such a nature as to limit the authorities to certain specific lines of action. They contain no authorization for the exercise of personal judgment in the treatment of unusual individual cases and no revision or modification is possible without legislative approval.

A brief experience with such circumscribed authority soon demonstrated the impossibility of carrying into effect many modern views concerning the scope of the work, and many trials at modifying the existing laws made evident the unlikelihood of satisfactory results. It was, therefore, decided to petition the state legislature to confer on the health authorities of cities of the first class in this commonwealth power to make regulations especially referable to the management of contagious diseases, regardless of existing laws, such regulations, when formulated and made public, to become laws susceptible of modification, amendment or repeal, as experience might dictate.

This request was granted, and as a result there are shortly to be put in operation a set of regulations that it is hoped may meet with your hearty support, since in framing them the utmost care has been exercised to safeguard fully the public health without working more than the minimum of hardship and inconvenience on the individual. While these regulations are issued as laws, it is true they are laws that may be modified or repealed as circumstances demand, and this, too, without the doubt and delay incidental to legislative consent. Therein lies the fundamental beauty of the act of 1905, under which we are at present operating. The new regulations differ in a number of particulars from those formerly in force, but this is made necessary by the demands of an ever-changing problem, of a progressive medicine and of an enlightened public.

PREVENTIVE MEDICINE IN THE PAST.

A comparatively short time ago the problem of preventive medicine, in so far as it concerned the health of the public, comprehended the suppression of only a small group of diseases having conspicuously epidemic tendencies. Little or nothing was known of their causation, scarcely more of the manner in which they were disseminated, and the means for their prevention, barring smallpox, were in the main empirical. The mildly contagious diseases, ever present in all populous centers, were not taken seriously; their existence was viewed as a matter of course, and as they were not conspicuously fatal they were accorded no official recognition. Tuberculosis, the most frequent cause of suffering and death, was considered an heirloom, dangerous only to the afflicted individual, and for him hopeless, unless amenable to cod liver oil and climatic treatment. The so-called miasmatic diseases, especially malarial and yellow fevers, were not supposed to bear any direct relation to other cases of the same diseases, and the channel through which such relation is established was scarcely more than suspected.

The important advance of recent years in our knowledge of the natural history of disease, especially as regards causation, modes of dissemination and methods of prevention, constitute one factor in forcing a different attitude toward transmissible diseases in general, while the demand of an enlightened public for a progressive and comprehensive consideration of the subject may be regarded as the other.

MODERN PUBLIC HEALTH ORGANIZATION.

As the successful solution of this problem depends fundamentally on a clear conception of its scope, not only by those officially responsible for its solution, but by those to whom they look for aid, it is appropriate at this time to indicate, possibly in some detail, the objects, aims and accessories of a modern public health organization.

In a word, the primary object of such organizations is to safeguard the public health by direct attention to preventable diseases. According to the tenets of modern medicine and the dictates of common sense, any disease that is transmissible from person to person should be, to

more or less extent, preventable, particularly if its exciting factor and the manner in which it is disseminated be known. If this dictum be admitted, it then becomes the duty of all interested in the prevention of disease to take into consideration not only the comparatively small group of conspicuously epidemic diseases, as formerly, but to enlarge the list to include all types of sickness that are known to be transferable from person to person.

Such is, in fact, the modern tendency. But in the practical application of means to the end the work may be fairly regarded as yet in the experimental stage. At the present time it is customary to consider diseases according to the degree of their transmissibility, those of a dangerous and highly contagious nature being surrounded by safeguards that are not thought necessary to the milder forms, while others are surrounded by no apparent safeguards at all, unless the educational methods practiced in connection with them be given their due value.

NOTIFICATION NECESSARY.

That such preventive measures as are appropriate to the exigencies of the particular type of disease encountered may be taken, it is necessary that all existing cases of transmissible disease be regularly and promptly recorded at a central bureau. Such notification falls to the practitioners of medicine of the community.

Here is encountered the first obstacle to correct administration, though I am glad to say that in this community it has never reached serious proportions. Nevertheless, questions often arise that it is of importance to our mutual understanding to discuss here. The commonest of these questions relates to the desirability of recording *all* types of transmissible disease. The principal reasons for recording all communicable diseases may be briefly summarized as follows: 1, that those in authority shall know definitely and at all times the exact disease situation in the community, otherwise the functions for which they are responsible can not be satisfactorily performed; 2, that local predisposing or exciting causes, possibly accountable for the origin and perpetuation of disease to a greater extent in one part of the community than in another, may be detected and, if possible, eliminated; 3, that immediate measures may be applied to those diseases admittedly demanding the utmost promptitude in official action; 4, that a correct and complete record of location and environment may be kept of those diseases less urgently requiring official supervision; 5, that appropriate educational measures may be employed in connection with the less dangerously communicable diseases; and, 6, that all channels through which disease may be carried from the infected premises may, if possible, be cut off.

The manifold uses made of such data as are here requested would be impracticable for a private practitioner, even were it his duty to utilize them in a comprehensive way. Successful practice of public preventive medicine is impossible without a prompt and correct registration of all types of transmissible disease, and there is no feature of the work more urgently demanding the conscientious co-operation of the private practitioner.

An occasional practitioner has regarded it as a hardship to be asked to report such cases, especially since he receives no compensation for it. Surely such complaint is made without reflection. For sake of argument let us assume that the general practitioner encounters on an average one case of reportable disease a week (a high estimate, I take it). Is it a very great hardship for him to fill out the spaces on a post card, supplied to him without cost, and mail it at a convenient post box? The whole operation should take but a few minutes at most.

As to the matter of compensation, is he not already paid, in this city at least? Is it forgotten that antitoxin for the treatment of diphtheria among the poor is gladly supplied him without cost whenever he demands it?

Is it forgotten that all of his cases of suspicious sore throat may be examined bacteriologically free of expense?

Is it forgotten that vaccine virus for use among those unable to pay for it is distributed gratuitously, and that vaccinations are performed, free of expense, by experts in the work whenever the request is made?

Is it forgotten that he is aided, again without expense, in the scientific study of supposed cases of typhoid fever?

Is it forgotten that the services of trained diagnosticians are to be had on demand in connection with all cases of supposedly contagious nature, and this, too, at no cost to either physician or patient?

Is it forgotten that the disinfectors of the health department are at his bid and call for all work properly coming within their province?

In short, is it realized that the entire machinery of the Department of Health stands ready to do for the public welfare anything within the scope of their duties that may be requested by a practitioner?

As I see it, there is compensation, and compensation in abundance, for the limited service that is required.

The importance of prompt, concerted action in the matter of reporting disease has been brought to our attention in a very forcible manner within the past three weeks. The incident is of such instructive nature that I venture to detail it. On October 20 the Bureau of Health was informed that there were several cases of typhoid fever in one of the students' boarding houses in the city. Simultaneously with that report came others from physicians practicing in the vicinity of the boarding house. The total number of cases occurring within a few days of one another, and in most instances in the surrounding neighborhood, is thirty-nine, all of which, when the necessary data were obtained, were found to receive milk from the same source. Two brothers supplying the milk were taken, practically from the delivery wagon, to hospitals, both suffering from typhoid fever. Further inquiry developed the fact that both brothers, up to the time of admission to hospitals, had been filling their milk bottles from the original cans by sucking the milk, with the mouth, through a rubber tube, and thus syphoning it from the cans into the bottles in which it was delivered to the customers. It seems to me that this is information of some value to the public. But when I tell you that twenty-four physicians and three hospitals were concerned in those thirty-nine cases of disease, and that none of the physicians reported over two cases, you may readily perceive how unlikely it would have been for us to have discovered the cause of the trouble had there been no notification, or only notification by a small number of the practitioners seeing the cases. There would have been little or nothing to attract attention, for the existence of two or three cases of typhoid fever in the practice of a single physician, in a city in which typhoid fever is disgracefully prevalent, is not apt to be unusual. It is not reports from one or a few men that are wanted; it is reports from all, and the aggregate of reports constitutes the datum that is of real importance to the work.

Inspection.—Complaints frequently reach the health authorities to the effect that their representatives are

officious; that they call at the houses from which cases are reported and ask many questions. The authorities readily assume the responsibility for questions asked, and they take great pains to instruct their representatives to pay due regard to the rights of the family physician when asking the questions. All questions authoritatively asked by an inspector who is detailed to secure data on a reported case have been duly considered and formulated by the responsible heads of the department. They bear on what may be called the sanitary history of the case, and the answers to them are of vital importance to the discovery of sources of infection common to groups of cases. They are not left to the inspector, but are on a printed blank, and embrace so many phases of the subject that were the physician in attendance asked to formulate them or to reply to them he might with justice complain that a hardship was put on him.

The Placard.—In the course of the customary official management of contagious diseases a bone of contention that has ever stood conspicuously to the fore is the use of the placard. It is not my intention to open the debate on this subject, but rather to state a reason, perhaps the most important reason, why the use of the placard is continued in the new as in the old regulations. This is best done by the recital of a personal experience. Some two years ago a medical friend in whom I have the fullest professional confidence, and for whom I have a warm personal regard, called at the bureau in something of a state of mental perturbation. He told me that two of his children were down with scarlet fever; that from the onset of the disease they had been perfectly isolated in the top story of the house; that a trained nurse had been secured to attend them; that there was absolutely no communication between these cases and the remainder of his family, and that he would be personally responsible for the continued quarantine of the cases until they were well if the placarding of his house could only be omitted. As he enjoys a large and lucrative office practice, as I had no doubt of his sincerity, and as I was new at the business, I consented to omit the placard. Within two days I received messages from two of his patients that gave me, I can assure you, a most uncomfortable few minutes. The complainants stated that they would under no circumstances have visited his office had they known of the existence of contagious disease in the house, and that as citizens they demanded of those in authority due notice of where dangerous diseases exist. It is evident that if the placard does nothing else it at least satisfies this reasonable request.

Vaccination.—For the past few years the health authorities of the United States have been greatly exercised over the occurrence of smallpox. The disease has prevailed in varying degree in almost every state of the country. Could there be a less flattering commentary on our vigilance and intelligence? With a method at hand for the absolute prevention of that malady, the responsibility for its existence falls directly on our own shoulders.

You may perhaps be astonished to learn that since the advent of smallpox in Philadelphia, in about 1898, there have been vaccinated at the public expense approximately 600,000 persons. Many of these had never been vaccinated at all, while many of the balance had submitted to the operation at so remote a date as to make doubtful the protective value of the vaccination. This figure includes none of the persons vaccinated by physicians in their private practice.

In addition there has been maintained, also at the city's expense, a hospital for the reception of a disease that should never exist and would not exist were we to perform unrelentingly our duties to the public. The two items of emergency vaccination and special hospital maintenance constitute a financial obligation that no enlightened community should be forced to assume. If vaccination and re-vaccination be rigidly enforced as a routine measure, I see no reason for the maintenance of expensive hospitals and the support of experts to care for smallpox patients. The few cases that might be imported from beyond our boundaries would cause no alarm, and they could easily be managed in simple temporary, but efficient, quarters.

While on this subject it is important to invite your attention again to an instructive experience gained in the course of official work. The routine medical examination of public school children now practiced by the medical officers of the bureau of health has revealed a practice that, to put it mildly, can scarcely be deemed commendable. Hundreds of children, having no sign whatever of vaccination, but still holding certificates of successful vaccination, have been discovered in the schools. The great majority of the certificates had been signed and issued by the physician at the time the operation was done and without subsequent verification. The exclusion of the child from school as a protective measure is, under the circumstances, imperative, with the result that it loses valuable time, while the physician at fault loses the confidence of its parents. The remedy for this is too obvious to require comment.

Diphtheria Antitoxin.—Scarcely less important than the value of vaccination in preventing smallpox is the prophylactic use of diphtheria antitoxin in combating the dissemination of diphtheria. The protection afforded, though temporary, is nevertheless absolute. In consequence this agent has become a permanent adjunct to the armamentarium of those concerned in public preventive medicine. The statistics of this community do not warrant the opinion that antitoxin is as widely used by physicians for the prevention or even the treatment of diphtheria as its value demands.

Hundreds of cases of typical diphtheria in the fourth, fifth and sixth days of the disease arrive at the Municipal Hospital annually without ever having had a single dose of antitoxin. Many of these cases had been seen by physicians, and yet the Department of Health is making every effort to encourage the more extended use of this agent. It is supplied without cost for use among the poor, and the medical officers of the bureau may be called on to administer the remedy free of charge whenever a physician so desires it. Did we take the pains to inform the public at every appropriate opportunity that the spread of diphtheria throughout a household or from one child to another can certainly be prevented by the injection of a small dose of antitoxin, its use would be more general; fatalities would be decreased in number, and the incidence of the disease enormously lessened.

Further Preventive Measures.—The opinion is growing among those who reflect on the subject that certain highly-contagious diseases may be and often are carried from one house to another by physicians, nurses, clergymen, undertakers and others who may have been in contact with them during the performance of their respective duties.

Such an accident is as little desired by the profession as it is by the laity and by those responsible officially for the public health, and as its prevention necessitates the taking of simple, common-sense precautions, it becomes the duty of those in authority to encourage in

every way all efforts to safeguard the public against such accidents by appropriate recommendations. The regulations authorized by the legislature of 1905 bear on this point—not in the way of rigid requirements, but as suggestions that it is believed will meet with the approval of all who are sincere in their efforts to co-operate in this work.

Hospitals.—Of all the auxiliaries essential to the safe conduct of this work, probably none is of greater importance than properly equipped hospitals. Such hospitals should contemplate not only the reception of cases that are unable to pay for medical care, but of pay cases as well, and in order to insure the use of the hospital by the latter there should be regulations permitting the medical care of such patients by their own private physician if it be so desired.

Such hospitals, for all diseases except smallpox, should be conveniently located, should be modern in equipment, should be attractive to the eye and in no sense suggestive of a pesthouse, and should be manned by men known to be experts in the management of the diseases that they are designed to receive. Every effort should be made to transfer patients suffering from contagious diseases to such hospitals.

Under the best of circumstances, even in hospitals, the complete isolation of certain diseases of this class is attended with difficulty; how much greater then does this become when they are at their homes often under the supervision, during the absence of the physician, of sympathetic though perfectly incompetent friends or relatives. Under ordinary conditions I believe it safe to assume that the progressive incidence of contagious diseases in a community is in direct proportion to the number of foci, i. e. of infected private premises, in that community. The lessening in the number of such foci by transference of cases to hospital is largely in the hands of the family physician. His advice will go far toward the accomplishment of the desired end, and in most cases such advice, I am sure, would be given had we appropriate accommodations for the patients.

In the majority of instances I believe a busy man in general practice would gladly be relieved of the responsibilities and annoyances of patients sick of dangerous communicable diseases were there suitable hospitals for their accommodation. The health authorities want your co-operation in efforts to secure for Philadelphia hospitals for the care of contagious diseases, not makeshifts or pesthouses, but modern institutions commensurate with the dignity of our city and of the utmost importance to the proper control of contagious diseases.

Disinfection.—In still another direction can the private practitioner be of substantial aid in the campaign against disease. There is no longer any doubt of the value of disinfection, cleanliness, sunlight and fresh air in destroying and eliminating contagion. Opinion on this subject is securely established on experimental evidence, statistical proof and wide experience. The routine disinfection and cleansing of premises occupied by the highly contagious diseases is approved and demanded by all, but the case is somewhat different with the less dangerous, though time-consuming, maladies of transmissible nature.

Much could be done toward lessening the incidence of the latter were similar measures taken in connection with them. Many of the laity do not comprehend the desirability of such action. A word from the medical advisor will serve to impress them with the need for it. In connection with the transmissible diseases that run a protracted course (I have tuberculosis in mind) frequent disinfection and cleansing by simple but efficient and appropriate methods will go far to lessen dissemination. As a general safeguard I believe that every house or apartment that has been vacated by a family, regardless of the question of disease in that family, should be disinfected before being let to others. This the Bureau of Health stands ready to do without cost to owner or agent and looks to you for co-operation in this suggestion.

The Creation of Public Sentiment.—Finally, it may safely be said that unless the public comprehends clearly the importance of the end toward which we are all striving, and appreciates the relation of all measures to that end, but little progress can be made. The campaign for the health of the people is essentially a campaign of education. Enlighten the people on all phases of the subject and at every opportunity, and the work will progress smoothly. Keep them in ignorance, surround the subject with mysteries that cannot be comprehended by a plain man, and no laws that are enacted or powers that are conferred will suffice to accomplish the desired result.

Original Articles

NATIONAL QUARANTINE A REASONABLE FUNCTION OF THE GOVERNMENT.

L. SEXTON, M.D.
Tulane University.
NEW ORLEANS.

The preservation of the health of the people of the United States is a function, within the scope of the duty of the national government. It bears a close relationship to the efforts put forward by the national government toward preventing the spread of epidemic diseases and finds its counterpart in the methods adopted to prevent the destruction of forest trees in the New England states and the destruction of the fruit industry on the Pacific slope.

The care of the health of its citizens, the keeping out of bubonic plague, Asiatic cholera, and yellow fever are certainly as important as carrying out the measures above mentioned, in which the government has undertaken control.

The suggestions contained in this paper, which will be mostly in reference to yellow fever, will apply as well to bubonic plague in California, to Asiatic cholera in New York, or the isthmus of Panama.

Every other health consideration along our Mexican gulf coast line dwindles into insignificance in comparison with yellow fever and the quarantines incident to the introduction of yellow fever at some of our southern dependencies. Previous to 1900 we thought these yellow-fever outbreaks dependent on fomites (whatever that may mean), but in 1905, in Louisiana, Mississippi and Florida, we went into the fight not blindly, but knowing our enemy and knowing that the sole propagator of the disease was the *Stegomyia fasciata* mosquito. It is needless here to go into details regarding what the world already knows; that we destroyed this insect in New Orleans at an expense to its citizens of one-quarter of a million dollars, made up by private subscriptions, to say nothing of the hundreds of millions lost in trade and commerce by the one hundred different varieties of quarantine, which we were called on to meet. Surely it is not reasonable or fair to suppose that this burden of

keeping out pestilential diseases from the entire United States rests on the citizens of one municipality or state, who are already taxed to the limit in maintaining levees to keep from being drowned by the floods of the great watershed of the West.

Uniformity of detention from infected parts would be one of the results we might expect from national control. Heretofore, each state has been a law unto itself, some adopting five and others six days' detention from points of departure, as seemed most feasible to the various boards of health. With a national law all this could be regulated so that no city, in its greed for trade, could let down the bars so as to let in infection. Because of the close railroad connection between the gulf cities, passengers can land at one port, and within five hours be in the next gulf city, thus nullifying the action of the board which required six days' detention.

Persons leaving Havana on fast steamer can go to New York and return to New Orleans within less than the six days' detention necessary at the New Orleans quarantine station; hence, New York and all other northern ports should really adopt this six-day detention or infection from yellow fever would become liable through the laxness of their quarantine.

If the national government were responsible for the inspectors in all the foreign ports, and if these were properly selected from the Army, Navy, Marine-Hospital Service or any national quarantine service and ordered to report the first outbreak of fever in Mexican and South American countries on pain of dismissal if their reports were not correct, it would keep the health guardians in constant touch with all ports from which infection comes.

A part of the duty of these inspectors might be to educate these countries in the destruction of the infected stegomyia mosquito, as on its complete destruction depends the annihilation of the yellow-fever plague, as a case of yellow fever would be incapable of developing the infection in others, without the mosquito to serve as the intermediary host.

It is not beyond the range of possibilities to exterminate the disease by the destruction of all the stegomyia and their breeding places; or by the screening for the first three days of all yellow-fever patients in all countries in which the disease is endemic. This would require the concerted action of all governments in South American countries, including Mexico and Brazil.

Compacts between state boards have not been kept as agreed to. To acknowledge the existence of yellow fever in a community is practically to shut oneself out from the outside world, and this is a hard thing to expect of the average community. Quarantine has been so destructive to trade that commercialism and politics have dominated some boards and forced them to take chances with the suppression of the first cases of yellow fever in the vain hope that it would not spread on account of the lateness of the season or the special efforts made to destroy the first infected mosquitoes.

Any city that has experienced the rigors of shotgun quarantine will resist the announcement of yellow fever until there is indisputable evidence of its existence. The first few days of an attack of yellow fever and one of malaria run such parallel courses that all the acumen of the best yellow-fever experts is at times put to the test in differential diagnosis of the severe forms of congestive or estivo-autumnal malaria and yellow fever. Hence, boards of health, in trying to deal honestly with the outside world, are often excusable for delay in coming to a conclusion.

GOVERNMENT INSPECTORS AND PHYSICIANS SHOULD BE REINFORCED BY LOCAL MEN.

It would be nearly impossible to get the best co-operation of the medical men of any community (without which no law would be a success) unless some of the men should be selected from the various communities and accustomed to the diagnosis and treatment of the diseases with which they had to deal. The position of inspector or diagnostician of any health organization is not a happy one.

To declare that there exists in a community a contagious disease, which means loss in trade and all the inconvenience of quarantine, and to stand firm by the diagnosis, to keep track of recurring cases, and to keep a municipality locked up when all its inclinations are to be free, requires the strongest kind of physical and moral courage.

During the epidemic of bubonic plague in San Francisco the lot of the Marine-Hospital Service men was not a happy one. Between locating cases and dodging bricks they led rather strenuous lives.

The uniform of the government, under such circumstances, is required to enable the health guardian to command the proper respect and protection. Men in this service should be entirely divorced from practice; they should be sanitarians and not practitioners.

How few of the ordinary political physicians who get appointments are really trained sanitarians? In many cases these men are selected more from the number of votes they can poll at the next election, rather than from any sanitary acquirements they may possess. Sanitary experts should always be divorced from national and local political and commercial influences.

There is no doubt that the United States uniform commands attention and respect, which is not given to the state official.

People stand in awe when the United States Government is behind a movement. In the recent outbreak in New Orleans, citizens permitted representative inspectors of the government to visit each bedroom in their premises in search of fever, whereas, no such freedom of investigation would have been tolerated for a moment from the state officials without the government uniform. While under ordinary circumstances we do not advocate the invasion of a man's premises, this becomes absolutely necessary in getting correct data in a cosmopolitan population, where to deny the existence of disease is no uncommon rule.

While this is an apparent encroachment on personal liberty and the accepted theory that "one's house is his castle," such stringent investigation is absolutely necessary, in order to be thorough in the suppression of epidemic diseases in cosmopolitan cities. As stated before, the greatest obligation a government owes to its subject is the preservation of the health of its people.

Our ports fronting on the Gulf of Mexico and on the Atlantic and Pacific Oceans should not be expected to bear the entire burden of the protection of the interior states from Asiatic cholera, bubonic plague and yellow fever. New Orleans should not be called on to contribute one quarter million from private citizens, as was the case in 1905, but all the interior states should help to keep out pestilential disease just as if the entire country were invaded by a foreign foe.

This is really the only way to make the burden of quarantine regulation bear equally on all. If all the states keep up separate quarantine stations, medical offi-

cers and paraphernalia, which costs an average of from $75 to $100 per vessel quarantine charges for every ship that enters our port at New Orleans, it makes the expense a hundred times greater than if the government or one central head should have charge of the entire regulation of quarantine matters.

To illustrate, Port Limon has had a medical inspector from the Marine-Hospital Service, one from Mobile and one from New Orleans, all watching for suspicious cases of yellow fever. If all this effort had been concentrated under a national quarantine service, removed from all political affiliations, there would have been a great saving in salaries and men.

The destruction of all the stegomyia and anopheles mosquitoes in the United States would mean the abolition of yellow fever and malaria. This contract is certainly large enough to be a government job and should be under its health department, and while we may never live to see this accomplished, a great deal can be done toward this end by draining the marshes and lowlands, thus rendering them suitable for cultivation. At present they are only the breeding places of these disease-carrying insects.

The building of the Panama Canal does not outweigh in importance the destruction of these two varieties of mosquitoes, for, while periodical outbreaks of yellow fever invade the country only in our southern states the anopheles mosquito is getting in his malarial work over nearly the entire area of the United States, and nearly all the time, and malarial fever kills its thousands where yellow fever kills one.

The destruction of anopheles or malarial mosquito is certainly, therefore, a national subject. The *Stegomyia fasciata* variety could be exterminated by oiling and screening cisterns and receptacles holding water and by putting open gutters in cities underground. The swamp mosquito (or anopheles) could be eradicated by draining or filling in our marshes.

It takes a malarial or yellow fever patient and a stegomyia or anopheles mosquito to propagate or to spread either of these diseases.

NON-POLITICAL CONTROL.

In nearly all the states' governments throughout the Union, regardless of which party is in control, there has grown up an office-holding syndicate which at each approaching election farms out or promises political jobs to medical health officers who control the greatest number of votes, regardless of any qualification or experience these men may have in dealing with health and quarantine matters; hence, changes recur with each election period, and health officers are deposed just about the time they are becoming efficient. I do not pretend to claim that a great many worthy and honorable medical men have not been chosen in the past to manage our health affairs; yet the reasonableness of the argument of divorcing all such appointments from a political spoil system is too apparent to need argument at my hands. Health officers should be protected by civil service rules so long as they are efficient and competent to do the work in hand.

As to whether the national quarantine should be under the supervision of the Marine-Hospital Service or under the control of the Navy or Army medical service or under a cabinet health officer, we leave others to argue, but that maritime quarantine should be in the hands of the national government we are thoroughly convinced.

ULCEROMEMBRANOUS ANGINA (VINCENT'S ANGINA) AND STOMATITIS.*

GEORGE H. WEAVER, M.D.
AND
RUTH TUNNICLIFF, M.D.
CHICAGO.

The disease to which attention is here directed has been described under several names, "ulcerative angina and stomatitis," "ulceromembranous angina and stomatitis," "pharyngitis ulcerosa," "angina diphtheroides," "angina exsudativa ulcerosa," "Vincent's angina," "angina chancriforme," "pseudomembranous angina," "spirochätenbacillen angina," etc. The name selected for the title of this paper is preferred as designating the principal characteristics of the process, i. e., ulceration and formation of a pseudomembrane. This is not a wholly satisfactory name, as frequently there is no ulceration, a pseudomembrane only being formed, as was observed by us in several cases. Vincent's name is not properly used to designate the angina, since it had been described[1] previous to his studies by French and Russian clinicians (Barthez and Sanné, Simanovsky, Nevejin, Moure and Mendel). All of the cases described are separated sharply by certain clinical and bacteriologic characteristics. On the affected mucous membrane there appear pseudomembranous formations and, as a rule, ulcerations. In the exudate are found fusiform bacilli usually in association with long spirilla.

ETIOLOGY.

Age.—The majority of cases reported have been in young adults between 18 and 25 years of age. Athanasiu's cases were in children between the ages of 26 months and 13 years. The patients we observed were children.

Sex.—Males are said to be more often affected than females, according to most observers. This is probably due to the fact that many of the patients have been soldiers and medical students. The majority of our cases were in girls.

Predisposing Causes.—The use of tobacco; trauma of the mucous membrane, as after tonsillotomy; eruption of a wisdom tooth; defective teeth or those covered with tartar; alveolar abscesses; gums of scorbutics; syphilis and mercurial stomatitis are said to predispose to this disease. It is said to follow the acute infectious diseases. Two of the cases studied by us followed scarlet fever, one followed measles and one whooping cough. Twice the condition was present at the onset of scarlet fever. The teeth were covered with tartar in the majority of our cases. Chronic enlargement of the tonsils and adenoids were present once. A previous history of alveolar abscess was obtained in one patient.

Bacteriology.—According to Tarassiewicz, as quoted by Mayer, the first observer to note the association of the fusiform bacilli and spirilla with a disease process was Rauchfus. In 1893 he presented cases of ulceromembranous angina in which he demonstrated pointed bacilli and spirilla and his photographs appear to show them to have been identical with those described by subsequent writers. Plaut, in 1894, described the organisms

* Read in the Section on Pathology and Physiology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

* From the Memorial Institute for Infectious Diseases, Chicago.

1. References to authors have been omitted, since a complete list of the publications can be found in the following recent articles: H. Beitzke, Centralb. f. Bakt., Erste Abt., Referate, 1904, vol. xxxv, p. 1; Weaver and Tunnicliff, Journal of Infectious Diseases, 1905, vol. ii, p. 446; Berkeley, Medical News, 1905, vol. lxxxvi, p. 976.

in five cases of ulcerous angina. Vincent, in 1896, described the fusiform bacilli and large spirilla in cases of hospital gangrene, and stated that the same organisms were found in certain anginas of an ulcerative type. Bernheim, in 1897, reported 30 cases of stomatitis and angina, in all of which he had found fusiform bacilli and spirilla. He appears to have been the first to point out the identity of certain cases of stomatitis and angina from the common etiology. Vincent, in 1898, reported a further series of 14 cases of ulceromembranous angina in which the organisms were present. These early reports have been followed by a large number of corroborating observations which testify to the occurrence in preponderating numbers of fusiform bacilli and spirilla in certain cases of stomatitis and angina. A large number of these observations have been recorded in French literature, many in German and American, and a few in English. They indicate the wide distribution of the organisms in question. The infrequency with which the disease has been recognized has probably been due to failure to make direct examinations of the exudate from pseudomembranous lesions of the mouth and throat. Because diphtheria bacilli are not detected with any certainty by such examinations, the custom of depending on cultures quite exclusively has become almost universal, and as the fusiform bacilli and spirilla do not grow to any extent on the medium usually employed for the detection of diphtheria bacilli they have been largely overlooked.

In ulceromembranous anginas, the two bacteria under consideration have been observed in association with diphtheria bacilli by Abel, Baron, Bernheim, Vincent, Niclot and Marotte, Auche, Simonin, de Stoecklin, Gallois and Courcoux and Oberwinter. Abundant fusiform bacilli but no spirilla were found together with diphtheria bacilli in one case by Beitzke and in 6 cases by Oberwinter. The latter author has observed 3 cases of diphtheria in which smears showed almost only fusiform bacilli and spirilla. That the organisms occur in syphilitic lesions of the mouth and tonsil is evidenced by the observations of Baron, Vincent, Freyche, Graupner, Hallopean and Apert, Salomon and Wolff.

Abel was successful in demonstrating both fusiform bacilli and spirilla in healthy mouths, especially between the gums and teeth. Gross found bacilli and spirilla in small numbers on the normal tonsils in 11 out of 13 persons. It is generally stated that the spirilla described in these cases are the *Spirochæta denticola* of Miller.

In most of the reported cases, the bacilli and spirilla have been recognized in smear preparations made direct from the seat of the disease, and in stained microscopic sections of tissues. Usually efforts to cultivate the organisms have resulted in failure. A number of investigators have grown the bacilli in mixed culture. Some also obtained a simultaneous growth of the spirilla.

The present description is based on the study of the organisms from the following sources: Two cases of ulceromembranous stomatitis, 4 cases of ulceromembranous angina, 1 case of pseudomembranous angina, 2 cases of combined angina and stomatitis, 1 case of noma of the cheek, 1 case of diphtheria, saliva and tartar from 18 healthy mouths.

Three of these cases, one of angina and one of stomatitis, and the one of diphtheria occurred in the wards for contagious diseases of the Cook County Hospital in the service of Dr. William L. Baum. Seven of the cases were observed in the Hospital of the Memorial Institute for Infectious Diseases in the service of Dr. Frank Billings and Dr. Alexander F. Stevenson. To these gentlemen we wish to express our thanks for the opportunity of studying and reporting the cases. Two cases were observed in private practice.

In smear preparations made from the seat of disease, bacilli and spirilla were found which corresponded to those described by previous authors.

The bacilli are long, slender rods with pointed ends, somewhat larger in the middle. Sometimes the ends are rounded and the rod may be rather thick. They are sometimes slightly bent, and occasionally take the form of the letter S. The length is usually from 6 to 12 microns, but sometimes filiform elements of considerable length are encountered. The bacilli are usually scattered uniformly throughout the preparations and often occur as pairs end-to-end, sometimes forming more or less obtuse angles. At times they are seen in irregular clumps, or arranged radially about a common central point, or in rows somewhat similar to diphtheria bacilli. They stain fairly well with Loeffler's solution of methylene blue and anilin-water solution of gentian violet, but best with carbol-fuchsin. With the less intense stains, especially in the larger forms, there are often portions of variable size and shape which stain faintly. No motility could be detected.

Graupner has illustrated the bacilli with stained peritrichous flagella. He found that motility was rapidly lost, even under favorable conditions in 20 minutes. Beitzke explains the varying expressions regarding motility by this fact, but it is better accounted for by Ellermann, who cultivated the shorter, curved forms in pure culture and found them to be motile spirilla.

The bacilli do not stain by Gram's method. The number of bacilli is variable. In the earlier stages of ulceromembranous angina and stomatitis they are most abundant, and they decrease as the process of recovery advances. When the bacilli and spirilla are most abundant, other forms of bacteria are present in small numbers. As the two organisms decrease, the associated bacteria usually increase. In normal mouths the fusiform bacilli were present in small numbers in smears from saliva, tongue and gums. In the case of diphtheria examined, they were so few as to be found only after considerable search.

The spirilla, also spoken of as spirochete, which are associated with the fusiform bacilli in a large proportion of instances are long and delicate, and present three or four turns. They stain uniformly and much less intensely than the bacilli, and in faintly-stained preparations might be overlooked. They do not stain by Gram's method, being much more quickly decolorized than the bacilli. They are usually quite actively motile, but sometimes not. The association of spirilla with the bacilli was observed in all the cases studied. In general they were in numbers corresponding to the number of bacilli. In the mouths of many healthy persons what appeared as the same spirilla were found, especially about the gums, often in enormous numbers.

Most authors believe that the fusiform bacilli and spirilla are entirely distinct varieties of bacteria, and consider that they act in symbiosis, the spirilla serving to enhance the virulence of the bacilli. Vincent, Niclot and Marotte, Baron, Hess, Oberwinter, etc., have observed that those cases of ulceromembranous angina in which only the bacilli are found are milder than those in which the two organisms are associated. In cases in which deeper destructions of tissues occur, the spirilla

are said to be constantly present. In the case of noma from which material for study was obtained, fusiform bacilli and spirilla were present in the nasal discharge from the beginning, and later in the ulcerative lesions of the gums and cheek.

Some observers have maintained that the bacilli and spirilla are different forms of the same organism (Seiffert, Perthes, Sobel and Herrman, Krahn). Most authors do not agree with this, but consider them two distinct organisms. After careful examination of many preparations, both direct from man and from pure and mixed cultures, we have been unable to find any appearances which would support these assertions.

From many of the cases the fusiform bacilli were grown in mixed cultures and from a few in pure cultures. They are obligate anaërobes. Details regarding these cultures are to be found in a former publication.[1] The spirilla have never been cultivated except in mixed culture.

Although the organisms described are found in association with characteristic lesions, the proof that they are the essential etiologic factors is not entirely complete. Further study of pure cultures may be expected to shed more light on the subject.

PATHOLOGY.

Athanasiu and others divide the affection into three periods: the onset, characterized by congestion and edema, the formation of the false membrane and finally the period of ulceration. In the majority of cases these three periods can not be distinguished.

The primary location of the disease is usually on the tonsil and edge of the gums. It may extend from these locations to the tongue, lips, even the soft palate, pharyngeal wall and cheek. The stomatitis and angina may occur simultaneously, but each is also observed alone. Extension beyond the common primary locations is not the rule. The deposits on the tonsils are usually irregularly oval or circular. It may be bilateral, but is usually unilateral. The pseudomembrane may be grayish, whitish, yellow, yellowish-brown or greenish in color. It is sometimes described as resembling the pseudomembrane of diphtheria, but usually it is thick, cheesy and friable in character. It may be marked by small hemorrhages (Hecht). The false membrane is usually readily removed, leaving a superficially abraded surface which bleeds easily and becomes again covered by an exudate in a few hours. With the progress of the disease, the ulcer may become much deeper, but shows little tendency to extend laterally. Sometimes the destructive process extends more deeply, leading to the destruction of the tonsils, uvula and parts of the pharyngeal wall (Baron, Bruce and others) As a rule, only one ulcer is present, but sometimes several are observed. The ulcers may become confluent, as was seen in one of our cases. They may be round or oval. The borders are pointed and irregular. The floor of the ulcer is uneven and later shows granulating points. They vary considerably in size. Sometimes the ulceration is very superficial or absent. There was none in three of our cases. The anginas have been classified by Vincent and others as croupous or membranous and as ulcerative, according to whether the ulcerative process is slight or prominent. The surrounding mucous membrane is red and slightly or considerably swollen. If the lesion is not observed at the outset, there appears to be no inflammation.

The submaxillary and retromaxillary glands are usually swollen, corresponding to the location of the disease in the mouth or throat. The swollen glands are firm, a number of small ones usually forming the mass. There is, as a rule, no periadenitis. They rarely suppurate. Raoult and Thiry claim that the glands are rarely swollen except in badly cared for cases, and use this fact as an aid in diagnosis.

Healing takes place slowly after 3 to 45 days. The swollen glands often remain enlarged for some time.

SYMPTOMS.

The symptoms vary much with the severity of the disease. Often there are no symptoms or only slight ones, and the lesion is found accidentally. The following symptoms may occur at the onset: Feeling of dryness or discomfort in the throat, dysphagia, lassitude, restlessness at night, loss of appetite, headache, coated tongue, constipation, sometimes diarrhea, vomiting, pains in abdomen, epistaxis, chills and fever. As a rule, there is little or no fever. One of our cases had a temperature of 103.2 F. In some of the other cases the temperature was high, but there were other pathologic conditions to explain it.

One to five days after the onset the local condition is observed. With it the chief symptoms are pain in swallowing, salivation and fetid breath. These do not always occur. Sometimes the dysphagia is slight. The breath may not be fetid if the case is mild or if antiseptic solutions have been used.

If the gums are affected the teeth may become loose. There may be bleeding from the gums, even if they are free from membrane.

Athanasiu speaks of earache and nasal discharge as occurring at this period. Oberwinter also often noticed a nasal discharge and urges the importance of this symptom in young children as directing attention to the throat. We observed a nasal discharge only once. In this case the organisms were found in the nose before they appeared in the mouth.

COMPLICATIONS.

Many observers have found no complications. Albuminuria, according to Simanowsky, is frequent, and Bruce and Simonin and others report cases in which it appeared. We observed it twice, but as the patients had scarlet fever it could be attributed to this disease. Herpes at the beginning was noticed by Baron. Conjunctivitis, which Athanasiu gives as a frequent complication, we observed three times. He also mentions anemia as a complication.

The other complications seen by us were gastroenteritis twice and noma of the cheek once.

The following complications have been reported according to Nicolot and Marotte: Appendicitis, pseudorheumatism, arthritis, endocarditis, pneumonia, pleurisy, infectious purpura, polymorphous eruptions, edematous patch in temporal region, with discoloration and tenderness (Nicolle).

PREVALENCE.

The disease seems to be very prevalent, many cases being undetected because of the mild course. Rodella found the characteristic bacilli in about one-third of 2,000 cases of pseudomembranous anginas from which he examined microscopic preparations. Abel found the organisms in 6 or 8 cases out of several hundred suspected of being diphtheria, and Beitzke in 5 out of 58 such cases. Lüblowitz found the fusiform bacilli in 6 out of 38 cases of ulcerative affections of the mouth.

CONTAGION.

Contagion in connection with this disease has been observed by Vincent, Dopter, Bernard and Auger and others, but for its occurrence close contact is apparently

required. Costa says that it may be communicated by means of pipes, pencils, etc. Small epidemics have been observed, especially in families. Seven cases occurred in the Memorial Institute within four months. There was no proof that it was transmitted from one patient to another.

DIAGNOSIS.

The diagnosis is made by the finding of the characteristic fusiform bacilli in the smears prepared from the exudate, usually in association with the long, more faintly staining spirilla. The organisms are not stained by Grams method. It is always necessary to exclude diphtheria by means of proper cultures, as the diphtheria bacilli may be associated with the fusiform bacilli. Syphilitic lesions must also be excluded by the history and associated signs of the disease.

PROGNOSIS.

The prognosis is usually good, but it must not be forgotten that considerable destruction of tissue may occur in rare cases, and that gangrenous processes and noma of the face may develop from these ulceromembranous lesions, as occurred in one of our cases. According to Vincent and Richardier, the prognosis is bad in children. Baron, Bruce and others have noticed a tendency for this disease to recur after partial or apparently complete recovery. We observed this once.

TREATMENT.

Filatov and Nevegin consider chlorate of potassium administered internally a specific for the disease. Crandall also found that chlorate of potassium did most good. Baron believes therapeutic applications of little use. Various antiseptic solutions have been used locally and tincture of iodin is spoken of with favor. Because of the anaërobic character of the bacilli, peroxid of hydrogen is most useful and should be applied directly to the seat of disease. Sobel and Herrman made use of a 3 to 5 per cent. solution of silver nitrate, applying it daily to the diseased areas. At the Memorial Institute success attended the use of peroxid of hydrogen, followed by the following solution:

℞.	Acidi carbolici	ʒss	2
	Zinci sulphocarbolatis	ʒii	8
	Aqua q. s. ad	ʒvi	180

PREPARATION OF A SERUM FOR THE TREATMENT OF EXOPHTHALMIC GOITER.*

[Contribution from the Huntington Fund for Cancer Research, Department of Experimental Pathology, Cornell University Medical College.]

S. P. BEEBE, B.S., PH.D.

NEW YORK.

The serum treatment of exophthalmic goiter, or Graves' disease, is not new. In addition to the ordinary medicinal measures which have been employed, many attempts have been made to obtain some specific of animal origin which would work as beneficially in exophthalmic goiter as thyroid extract does in myxedema. A few of these attempts have been partially successful, and since I wish to compare the serum which we have used with that tried in previous experiments, I will outline briefly the present condition of the problem.

The fundamental ideas for serum therapy in this disease are, first, that the symptoms are caused by an hyperactivity of the thyroid gland, and, second, that the physiologic action of the thyroid secretion is to neutralize some toxin arising in the course of metabolism. With our present knowledge the thyroid origin of the symptoms of the disease seems the most rational of any thus far proposed, and, while not committing myself to it absolutely, I shall accept it without further comment for the purposes of the present discussion.

The success attained in the thyroid extract treatment of myxedema suggested that a similar means be employed with exophthalmic goiter. Thyroid extract, it was soon found, aggravated the symptoms in nearly every case, and since the typical picture is that of an intoxication of thyroid origin, attempts have been made to neutralize the products of the excessive activity of the gland by providing an oversupply of the toxin with which it is supposed the thyroid secretion normally combines. Theoretically, this combination detoxicates both components. Among the earliest experiments to make therapeutic use of this idea was that of Burghardt and Blumenthal,[1] who injected into a patient suffering from exophthalmic goiter blood obtained from a case of myxedema. Two hundred and forty cubic centimeters of a mixture of equal parts of blood and salt solution were administered during a period of eight weeks, and during the treatment the patient showed very marked improvement. Theoretically, the blood of animals which have been deprived of the thyroid gland should contain an excess of the metabolic toxin, ready for combination with the thyroid secretion. Ballet and Enriquez,[2] and later Burghardt and Blumenthal,[1] used the serum of thyroidectomized dogs, both orally and by hypodermic injection, with beneficial results.

More recently, under the leadership of Moebius,[3] such a serum obtained from thyroidectomized sheep has come into wide use. This serum is now a commercial product, sold under various names, such as thyroidectin, antithyroidin, etc. Some favorable results have been reported from its use, but in the hands of most observers the treatment has not been of marked benefit. The difficulties of practical application of such a serum as this are great. Animals react quite differently to thyroidectomy, and the impossibility of standardizing the serum, together with the great variation in the dosage and means of administration, may account for some of the discrepancies in the results. It must be said, however, that the nature of this toxin and its presence in the serum of thyroidectomized animals has not been satisfactorily investigated.

The other method, which depends for its efficacy on an inhibition of the thyroid by means of a cytolytic serum, has had thus far only a very limited trial and the results have not been encouraging. I believe there are good reasons why the experiments have failed, and these will appear evident during the discussion. Numerous investigators have endeavored to develop a serum having cytolytic action for the thyroid gland. The method of preparing the serum has been uniform in nearly all of the experiments, but the results reported are quite variable.

In this country the first attempts were made by MacCallum,[4] who injected emulsions of dogs' thyroids into geese at weekly intervals until they were supposed to be immune. He obtained some characteristic effect on injecting the serum thus prepared into dogs, but in most cases the animals became very much emaciated and cachectic without showing symptoms due to hypothy-

* Read at the New York Academy of Medicine.

1. Burghardt and Blumenthal: Deutsche Med. Woch., 1899, p. 627.
2. Ballet and Enriquez: Congrès des Alienistes et Neurologistes Francais de Bordeaux, 1895.
3. Moebius: Neurologisches Centralb., No. 22, 1901.
4. MacCallum: Medical News, Oct. 31, 1903, 820-828.

roidism, although many of the injections gave a fatal result. In only one case did he find any lesions in the thyroid gland. His work has been confirmed by Yates,[5] who made an antiserum by injecting dogs' thyroids into roosters or geese. He could demonstrate no cytolytic effect *in vivo,* although he had good test-tube reactions.

Portis[6] has worked along much the same lines. In his experiments goats were immunized to dogs' thyroids in three different ways: First, by using the crushed glands; second, by injecting the crushed gland, which had first been washed out with salt solution to free it from blood; third, by injecting the colloid matter prepared by Hutchinson's method.[7]

The serum was administered to three groups of dogs in doses of four cubic centimeters per kilo., with the following results: The first serum caused a tremendous reaction, with profound hemoglobinuria. The second caused a good reaction, but only a slight hemoglobinuria. The third group, receiving serum developed by injections of colloid, showed a milder reaction, but no demonstrable hemoglobinuria was noticed. A point of great interest attaches to the fact that the thyroids of all the animals receiving serum were found to be free from colloid matter. No other lesions were found.

Some interesting and important observations have come from the foreign laboratories. Slatineano,[8] working with a serum made according to the usual method, has been able to produce some changes in the thyroid epithelium, but never the lesions of chronic sclerosis. Following the feeble doses, he observed an enormous overproduction of colloid, which distended the vesicles and at the same time there was a diminution in the volume of the epithelial cells. With large doses subcutaneously, he obtained some necrosis of the glandular epithelium. When the serum was introduced directly into the carotid artery he observed a necrosis of the thyroid epithelium on the side corresponding to the artery injected; the vesicles were found opening into one another, while the colloid had completely disappeared. In the opposite thyroid, which had been in contact with less serum, he observed a complete disappearance of the colloid. These observations confirm a similar one made previously by Portis.

Two Belgian investigators, Demoor and Van Lint,[9] have reported results so diametrically opposite to those of other students of the subject that it is difficult to believe in their accuracy. Their serum was made by injecting guinea-pigs or rabbits with an emulsion of dogs' thyroids. Their method was somewhat peculiar, in that they made their injections on every second or third day and bled the animals three days after the last injection, whereas the usual method is to make the injections at intervals of five to eight days and bleed six to eight days after the last injection. Demoor and Van Linf state that their method is essential to obtaining an active serum and that if the usual method was followed they failed to get results. Their experience in this respect is quite unique. It may be true, but it is contrary to the experience of other investigators, and it does not harmonize at all with my results with hepatotoxin and nephrotoxin, nor does it accord with the established principles of immunity. They also found that it is necessary to inject an emulsion of the whole gland in order to produce an active serum. Injection of iodothyrin, thyreoglobulin or nucleoalbumin did not yield an active serum. It is their belief that there is present in the whole gland some substance as yet unknown on which the development of an active serum depends. They state that when a serum made by their methods is given intravenously to dogs it causes all the symptoms of a strong and quickly fatal hypothyroidism. From a study of their methods and results I am inclined to believe that they were dealing with a hemolytic serum, which had little, if any, specific action on the thyroid gland.

The preceding summary of the more important experimental studies of thyroid cytolysins gives an uncertain basis for clinical application. Attempts have been made, however, to produce cytolytic serum having therapeutic value in the treatment of exophthalmic goiter. Murray[10] has recently published his experiments in this direction, and, although they are faulty in many particulars, I have great respect for the honesty and accuracy of his conclusions. In his first experiment rabbits were fed on sheep thyroid extract for a month and the serum from the animals was then used in the treatment of two cases of exophthalmic goiter. The dose of serum was at first 5 minims once a day and later 7 minims three times a day, given by mouth. Both cases improved under treatment, but not more than might be expected from rest with the common medicinal measures. (It is open to serious doubt whether Murray could develop an antiserum by the method which he employed, viz., feeding thyroid extract to the rabbit.) In his later experiment Murray began by giving subcutaneous injections of sheep thyroid extract to a goat, but since so many abscesses resulted from this procedure he changed the method of administration and gave the extract by mouth for a period of two months. The serum from this goat was used in treating two cases. The serum was given by mouth, beginning with 5-minim doses three times a day and gradually increasing to 20 minims. In one case there was a gain of eight pounds in weight, but Murray concludes that the improvement noted in both cases was no more than usually takes place on ordinary treatment, and that no special effect could be attributed to the serum. It may be objected that the method of producing the serum in these experiments was faulty. The goat is not sufficiently far removed from the sheep as an animal species to serve well for such a purpose, and administration of thyroid extract by mouth has never been shown to develop immunity. Even though some degree of immunity had been obtained, there is no reason for supposing that it would be in any degree efficient for antagonizing the pernicious activity of the human thyroid gland, since its antitoxic properties would have been developed by a biologically different proteid than the one it was expected to oppose *in vivo.* It would be quite as logical to use diphtheria antitoxin in the treatment of tetanus.

The serum which I have prepared has a somewhat different experimental and theoretical basis. During the last year I have been interested in studying the preparation and action of cytolytic serum having a higher degree of specificity than that which has been reported previously. A paper[11] has been published recently giving some of the results of this work, so I shall give here only a brief summary of it.

The cytolytic serum studied by other investigators has been made in nearly all cases by repeatedly injecting an organ pulp into the peritoneal cavity of some animal of an alien species. The serum thus developed may show

5. Yates: Univ. of Penn. Medical Bulletin, vol. xvi, 1904.
6. Portis: Journal of Infectious Diseases, vol. i, 1904, p. 127.
7. Hutchinson: Journal of Physiology, vol. xx, 1896, p. 474.
8. Slatineano: C. R. de la Soc. Biol., vol. lix, 1906, p. 76.
9. Demoor and Van Lint: Ref. Biochem. Centralbl., No. 2, 1904, p. 166.
10. Murray: The Lancet, Nov. 11, 1905.
11. Beebe: Jour. of Exper. Med., Nov., 1905.

some antiaction toward the particular organ used for injection, but in most cases such action has been obscured by the very marked hemolytic and hemagglutinative properties. Indeed, Pierce[12] believes that much of the effect of the hepatotoxin and nephrotoxin developed by injection of the full cells is due to the agglutinated corpuscles forming small thrombi with resultant focal necroses. Practically all observers have noted a severe hemoglobinuria following the administration of such a serum. The results obtained have, therefore, justified the conclusion that it is impossible with such serum to cause definite lesions in one organ without at the same time injuring other organs. The serum has no morphologic specificity.

The cytolytic serum with which my experiments were made by was developed by injecting the nucleoproteids of some organ, such as the liver or kidney, instead of the whole organ ground to a pulp. The reasons for selecting nucleoproteids for this purpose are obvious. We know that the nucleus is the most important morphologic and physiologic part of the cell. If specificity is a function of any of the cell constituents, the nucleus must be most intimately concerned therein. They are the chemical basis for the most fundamental of the cell processes, and it seems to me that it is not unreasonable to suppose that by using only the nucleoproteids for the development of the serum a considerable amount of what we may call extraneous material has been excluded, and only those compounds have been included which have to do with the particular work of some selected group of cells.

Because of the biologic differences in proteids it is necessary to develop the serum from the proteids of the same species of animal as we use later for testing its activity; that is, nucleoproteids from dog organs were injected into rabbits at seven-day intervals until five injections had been made, and the serum from these rabbits was then tested on dogs. We could not expect such a serum to have much effect on the organs of cats or guinea-pigs. Test-tube reactions show that a serum made by injection of nucleoproteids is much more specific than the sera made from the full cells. The results obtained by the biologic test, however, are by far the most interesting outcome of the work, and in confirmation of the test-tube reactions show that such a serum is highly specific in its action. If the serum has been developed by injecting nucleoproteids from the dog liver, we find that its administration makes the animal very sick, and if the dose has been as much as 2 c.c. per kilo, the result is fatal. This dose is very much smaller than has been used by most previous investigators, but is still about 100 times larger than the dose of thyreotoxin, which we used later as a therapeutic dose in treating the exophthalmic goiter patients. Postmortem we find that the liver has been badly damaged, while the other viscera have not been injured. Other observers have found that a serum made from liver pulp invariably causes lesions in the kidney with albuminuria. The serum made from the liver nucleoproteid, on the other hand, has not produced renal lesions, and at no time has there been albuminuria following its use. However, if the serum has been developed by the injection of kidney nucleoproteids its administration causes an acute nephritis, which may be quickly fatal. In some cases 50 per cent. of the total nitrogen in the urine has been in the form of albumin.

A constant phenomenon was observed in what I have called the latent period. To illustrate: In some cases the nephrotoxin was given in small repeated doses intraperitoneally, and in others in one large dose intravenously. In the latter case the animal showed an immediate reaction, but in ten hours had completely recovered and remained normal for three to five days. At the end of this interval a slight amount of albumin appeared in the urine, and the condition grew rapidly worse, until by the eighth or tenth day the animal had a very severe nephritis. The few days which elapsed between the administration of the serum and the appearance of the albumin is the latent period.

Antisera made by the injection of nucleoproteids are not absolutely specific, for they have a weak hemolytic and hemagglutinative action. At such dilutions as are used *in vivo,* however, there is neither lysis or agglutination of the blood corpuscles. This statement is based on test-tube reactions, and it may be that the conclusions do not hold for the inoculation experiments. Without following the details of this work further, I may say that from it we have drawn the conclusion that it is possible by the injection of the pure nucleoproteids of a selected organ into the peritoneal cavity of an animal of alien species to develop a serum having a high degree of specificity in its action toward the selected organ.

At Dr. Rogers' suggestion I endeavored to apply the principles which had been determined in the work with hepatotoxin and nephrotoxin to the preparation of a serum which would have cytolytic action on the human thyroid gland and therefore be of therapeutic value in exophthalmic goiter. Just at this time we were fortunate in securing an autopsy the thyroid glands from two fatal cases of the disease, and it seemed best to make the first experiments with them. The problem is not precisely similar to that of the former work. We do not wish to produce a definite lesion in the gland or injure it to the same degree as we did the livers and kidneys. The ideal result would be an inhibition of glandular activity which would be sufficient to restore a more nearly normal condition of affairs. It seemed to me, also, that the problem was not simply one of producing a cytotoxin of some decided specificity for the thyroid, but that account must be taken of the fact that the thyroid secretion probably has toxic action, and we should endeavor to neutralize that as well as inhibit the gland. A brief consideration of the proteid constituents obtained from the thyroid will be necessary to understand how these two factors influence the work.

Three sorts of proteid may be obtained from a saline extract of the gland, viz.: nucleoproteid, globulin and albumin. The colloid matter contains globulin and albumin, while the nucleoproteid comes from the nuclei of the secreting cells. In the older literature the globulin was confused with the nucleoproteid. Oswald[13] has shown in a number of researches that the globulin is the iodin-containing proteid of the gland and that it alone is responsible for the peculiar physiologic activity which the whole gland has. Accordingly we isolated in pure form the nucleoproteids and thyreoglobulin from the Graves' glands at our disposal. The method of isolating the nucleoproteids was the same as that followed in the previous work with dog organs and has been described fully in the paper[11] already published. The globulin was precipitated by half-saturation with ammonium sulphate, and, after filtration and washing, the excess of salt was removed by dialysis. Some injections were made from the fresh proteids, but the larger portion was dried at low temperature for preservation. A mixture of the two proteids was injected into rabbits. The nucleoproteids were included in this mixture be-

12. Pierce: "Studies from the Bender Hygienic Laboratory," 1904, 1.

13. Oswald: Virchow's Archiv., vol. clxix, 1902.

cause I wished to produce some cytolytic effect on the thyroid gland, and the globulin because I hoped thereby to develop an antitoxin to counteract the toxic symptoms. We have been accustomed, therefore, to speak of our serum as having both cytolytic and antitoxic properties, but our only reasons for so speaking have been the theoretical ones just mentioned. It may be that a serum made from the globulin portion of the gland would have cytolytic action. Portis, however, did not find that his serum made from the colloid of the gland had much cytolytic effect. A serum made from the nucleoproteids alone may have antitoxic properties, but I should not expect such behavior, *a priori*, because the nucleoproteid is not the portion of the gland responsible for its toxic effects. I am certain, however, that the whole gland is not essential to the production of a potent serum, and it seems not unreasonable to conclude that the nucleoproteids are as intimately concerned in the production of thyreotoxin as they are of hepatotoxin and nephrotoxin.

The rabbits were given injections of the proteids intraperitoneally at five-day intervals and were bled on the eighth day after the last injection. The earlier serum was developed from larger quantities of proteid than the later, because our supply of proteid would not permit us to continue such liberal treatment as we had given at first. I believe these smaller injections did not produce so active a serum. The amount of proteid given at each injection varied somewhat with the size of the rabbit and his reaction to the treatment. During the first two weeks a six-pound rabbit would generally lose one pound in weight, but this was followed by a slow gain to nearly or quite the original condition. The animals were bled from the carotid artery into sterile tubes and the serum poured off after the clot had been allowed to contract for twenty-four hours in the refrigerator.

I believe that the results of the therapeutic application of the serum are more than coincidence and that an impartial consideration of the clinical evidence must lead to the conclusion that improvement and, in some instances, recovery has been caused by the administration of the serum. The physiology and pathology of the thyroid gland are so obscure that such a means of treatment as the employment of a cytolytic serum can not be applied as yet with a high degree of intelligence. There must be some degree of experimentation with each patient. An active antiserum made from human tissues is capable of doing a great deal of harm and must be applied with great caution. It can not be said of such a serum, as it often is of tetanus or diphtheria antitoxin, that it may be used in liberal quantities because it will do no harm even if it does no good. The therapeutic dose is a very small one. Alarming reactions have followed the injection of one cubic centimeter of the serum. I do not claim that the serum is absolutely specific. We have only the clinical evidence on this point backed by the analogy with the hepatotoxin and nephrotoxin, which is imperfect, because those were developed from nucleoproteid alone, while the thyreotoxin has come partly from the globulin injected. In fact, we have produced just enough light to intensify the darkness.

The work has suggested more questions than it has answered and, very naturally, we have now experiments in progress to determine whether a serum can be made from normal thyroids which will be efficient therapeutically. No definite statements can as yet be made in regard to the matter, for, in view of the lack of conclusive experimental evidence, personal opinion is of no consequence.

THE TREATMENT OF EXOPHTHALMIC GOITER BY A SPECIFIC SERUM.*

JOHN ROGERS, M.D.

Surgeon to Gouverneur Hospital, Assistant Surgeon to St. Francis Hospital.

NEW YORK.

The most generally accepted theory of the direct causation of the symptoms of exophthalmic goiter, or Graves' disease, is overactivity of the thyroid gland, and the active portion of its secretion is similarly believed to be a globulin containing iodin, called thyroglobulin. In the attempt to neutralize this secretion or check its production several schemes for serum or allied methods of treatment have been tried. Among these may be mentioned the serum of thyroidectomized dogs drawn after the animal had been operated on and had developed symptoms of athyroidism; the serum of a patient suffering from fully developed myxedema; the serum and the fresh and dried blood and the fresh and dried milk of the thyroidectomized goats, commonly known as Möbius serum; the serum of herbivorous animals which had been fed for varying lengths of time on the thyroid glands of animals of another species, and the serum of animals into which emulsions of the thyroid glands of another species had been injected. Conflicting results have been reported for all these, but they generally agree in a failure to cure.

While assisting last year on the clinical side of the work in some experiments for the production of cytotoxins, conducted by Dr. S. P. Beebe in the laboratories of the Cornell University Medical College, I was greatly impressed with the specific character of a nephrotoxin which he had made from dogs' kidneys. The principle seemed directly applicable to the treatment of exophthalmic goiter, and as I obtained at this time two of what are clinically and in the gross the large, soft, cellular thyroids of exophthalmic goiter, I induced Dr. Beebe to make from this material a thyroid cytotoxin for man in the same manner as he had already made the kidney cytotoxin for the dog. The glands were ground to a pulp, extracted with normal salt solution and the coarse fibers strained off. The rather thick, cloudy filtrate was then made frankly acid with acetic acid and a heavy precipitate of nucleoproteids resulted. The supernatant liquid was then syphoned off and half saturated with ammonium sulphate, which carried down the remaining nucleoproteids and the globulins including the thyreoglobulin or supposed active secretion of the thyroid gland. These precipitates were combined, and after removing the neutral salt by dialysis were, to some extent, injected while fresh into rabbits. The major part of the precipitate was, however, dried for preservation. The rabbits showed a severe reaction to these injections and some died (one, at least, with many of the symptoms of exophthalmic goiter) and thus wasted our precious material, which at first was used freely. After about five weeks of this treatment the rabbits were bled to death from the carotid and the serum thus obtained from these first inoculations I shall call serum A.

Serum B was made in August from the dried precipitate, then four months old, of nucleoproteids and thyreoglobulin obtained from these diseased glands. The powder was dissolved in normal salt solution and injected as before into rabbits, but the demand for the finished product was urgent and somewhat more haste was employed than in the preparation of serum A.

* Read at the New York Academy of Medicine.

The preparation of serum C in a similar manner was begun a month later, or when the dried powder was about five months old, and the animal inoculations were conducted with care and slowly, but with as little of the original material as would produce a reaction, since by this time its value was becoming apparent and the quantity of the dried precipitate very much decreased.

Serum D was made from the normal human thyroid gland as obtained at autopsy in the morgue, and has not proved satisfactory. The glands which have generally been received several days after death were ground to a pulp, extracted with normal salt solution and the liquid strained through gauze. The filtrate was then made acid with acetic acid and, as very little precipitate resulted, dilute alcohol was added. The precipitate thus finally obtained was suspended, while fresh, in normal salt solution and injected into rabbits at intervals of about five days for some four weeks. The animals showed little or no reaction to the treatment with this material, and thus presented a noticeable difference from the previous experience.

The results produced by these sera are best explained by a brief summary of the case histories:

A. F., suffering from typical exophthalmic goiter, received a total of 30 minims of serum A when it was fresh, and showed a pronounced local and constitutional reaction about four days after the first dose. Recovery took place gradually and the condition was practically normal at the end of some five months.

E. R., suffering from typical toxic exophthalmic goiter, received 15 minims of the fresh serum A at one dose, and had a bad cardiac dilatation five days later, but recovered completely during the next three or four months.

M. B., suffering from a severely toxic exophthalmic goiter, received 1 c.c. of the fresh serum B in divided doses with a pronounced reaction four days after the first dose, but has now (five months later) recovered from practically all symptoms.

E. M., with a typical form of the disease, showed a similar postponed reaction and slow recovery after a small initial dose of serum C when it was a few weeks old.

L. M., suffering from typical toxic exophthalmic goiter, received a similar dose of serum C when it was two months old, and, without any noticeable reaction, was changed from a moribund to a convalescent condition and has now completely recovered.

A. P., suffering from a severely toxic form, also changed from a moribund to a convalescent condition within three days after the administration of 2 c.c. of serum B and 2 c.c. of serum C when each was about three months old. She seems now to have almost completely recovered. There was no bad reaction whatever.

F. E., suffering from an atypical form of the disease, showed a severe postponed reaction to serum C when it was a few weeks old and then recovered gradually.

The other three cases showed the same peculiarity, but have not exhibited much or any improvement for reasons revealed in the case histories.

Thus ten cases have been treated with sera A, B and C, with a result of three apparently perfect cures, three rescued from a critical condition and now approaching a cure, and the others more or less improved, their improvement depending, as it now seems, on several factors which it is legitimate to attempt to explain. In this explanation, however, it must be borne in mind that a great deal is inference or supposition and very little has been definitely proved.

It was noted in these cases that the first serum made by freely inoculating the rabbits with the fresh precipitate of nucleoproteids and thyreoglobulin of the diseased human gland produced the best results with the smallest dose and the most reaction (serum A). The serum made later, when this precipitate from the diseased thyroid was several months old, was made in some haste and still proved effective, but required a larger dose and produced somewhat less reaction (serum B). The serum made still later (serum C) was derived from smaller injections of the dried precipitate carried over a slightly longer period and was about the same as serum B, but apparently less efficient than serum A. Each of these produced no appreciable result after injection until the lapse of at least twenty-four hours, and then there was some improvement in the subjective symptoms. Some four or five days after the first dose, and on the second or third repetition of the injection, there developed a severe erysipelatous erythema, with swelling all around the point of puncture. This would be intensified by another dose in a different part of the body and was accompanied by a sharp rise in temperature and very unpleasant cardiac disturbance in the form of irregularity or great rapidity and (in one case) sudden extreme bradycardia. The animals treated with the specific cytotoxin for the kidney, liver or pancreas would show little or no reaction for several days, perhaps a week, and then suddenly sicken and die, and at autopsy the organ under investigation would be found to be the one chiefly affected. The kidney and liver consist almost entirely of secreting cells, and so supply a large amount of definite material, presumably nucleated secreting cells, for which the inoculated animal can produce antibodies. The normal thyroid, on the other hand, contains a good deal of stroma, blood vessels and colloid, but comparatively few secreting cells, and to make a cytotoxin which is specific in a pronounced degree for any given kind of cell it seems to be necessary to use that kind of a cell for the inoculations, not only in considerable quantity, but as much as possible, to the exclusion of all other kinds of cells. Therefore, to make a cytotoxin for the thyroid gland there must be obtained, in the first place, a great number of the secreting cells of this organ, and then as few as possible of the cells of the stroma and blood vessels which are common to all other organs and tissues.

Whether this is true or not, the precipitate or nucleoproteids obtained from the ground-up Graves' thyroid, suspended in salt solution, is very abundant and comes down in a flocculent mass, while the similar precipitate from the normal gland is almost inappreciable and has to be obtained by a slightly different method. The supernatant liquid over the first heavy precipitate from the Graves thyroids contains, as stated previously, some suspended nucleoproteids, and with them the globulins, including the thyreoglobulin or supposed active secretion of the organ. These were precipitated separately by ammonium sulphate and then combined with the first precipitate of nucleoproteids by acetic acid, and after removing the neutral salt, injected into rabbits at intervals of five days for four weeks. There were thus produced antibodies for both the cells and their secretion; in others words, a serum which may be supposed to contain both a cytotoxin and an antitoxin. These terms are used only as conveniences in an attempt to construct a working hypothesis, and it must be remembered that the difference between a cytotoxin and an antitoxin is by no means clearly understood.

In the experiments with a cytotoxin designed to be specific for a dog's kidney, the animal showed no reaction for several days and then died from an acute nephritis. The severe reaction with the thyroid serum in the patients whose histories are given took place after a corresponding interval succeeding the first dose if the

serum was fresh, but if it were old the reaction seemed to decrease in proportion to the age of the serum. At the same time the permanence of the effectiveness of the dose also seemed to decrease, and hence the bad qualities of the medicament can not be eliminated by storing it in an icebox for several weeks or months. The bacterial cytotoxins have somewhat the same perishable characteristics.

But there is also some appreciable improvement, especially in the nervousness and sleeplessness which takes place within a few hours of the time of administration of this serum, and this property still persists apparently as strong as ever in some of serum B, now five months old, and as the thyreoglobulin was contained in the material originally used for inoculating the rabbit it is reasonable to imagine an antibody for it, or an antitoxin, in the serum. This also is comparable with the bacterial antitoxins, which persist unchanged for a long period and when administered act quickly.

If this double content of the serum can be granted, the one for lack of a better term called a cytotoxin, having a late and cumulative effect in suppressing the action of the thyroid secreting cells, and the other, an antitoxin nullifying the action of the excessive thyreoglobulin, much helpful light is shed on the clinical phenomena. We may imagine, and it is not incompatible with the clinical facts, that the fresh serum stops the active poisoning and a little later inhibits the activity of the gland, and in doing so in some manner breaks a vicious circle which, without destroying the thyroid, leads to a gradual resumption of its normal function. If, however, the serum is old or deficient in the supposed cytotoxin element, there is only a temporary suppression of the pathologic process, which in course of time is again in evidence.

The above statements summarize our present knowledge of and experience with this remarkable serum, and are admittedly very incomplete and unsatisfactory. It requires weeks to prepare the serum and months to observe its effect, and as the subjects all have to be human and the medicament is evidently dangerous its administration has to be conducted very carefully and slowly. Any error in the preparation, or any bacterial contamination, means a "start all over again," but we have always kept a little of the original very effective material on hand to use in critical cases. The ordinary treatment, fortunately, can carry along the average case until we are sufficiently sure of any particular product that happens to be ready. I have purposely omitted all mention of the etiology, pathology and symptomatology of exophthalmic goiter, as this involves another uncertainty in that some forms of the disease may not be amenable to this treatment. In fact, I do not believe that a serum made by this method will cure all cases of the disease, as there have been very marked differences in the individual reactions. As a general rule, although it is not invariable, those who have had the most reaction have progressed the most satisfactorily, and it does not seem to hasten recovery if the injections are constantly pushed. On the contrary, this seems to retard the progress.

Then there is a certain type of cases which has seemed peculiarly refractory and liable to relapse. These patients have no exophthalmos, but they do have an asymmetrical thyroid, that is, one with a cystic or adenomatous enlargement. They complain chiefly of digestive disturbance, with fermentation and pain, which may be abdominal or thoracic, and with this disturbance there is generally dyspnea and labored breathing. They also have marked weakness, a soft, feeble pulse, and either an intermittent or constant tachycardia. They are emotional and generally "nervous." Operative removal of the adenoma or cystoma is usually futile in that it does not cure the symptoms, and the interference may be dangerous, as I have more than once observed.

The bad chronic cases of the disease, with dilated and hypertrophied heart and the secondary lesions following imperfect circulation, should, of course, recover much more slowly than those which are uncomplicated or of less duration. I believe that when the thyroid is removed by operation for exophthalmic goiter and an acute thyroidism follows, it can be checked by serum C, and I have preserved some of it for this purpose, but have not yet had the opportunity of thus testing it.

The difficulty of obtaining the normal human thyroids in a sufficiently fresh and uncontaminated condition (to say nothing of the pathologic thyroids) and the technical difficulties in the manufacture will probably prevent any commercial use of the product. The least error or variation in the complex mechanical or chemical methods employed by Dr. Beebe may spoil the finished serum or make it extremely dangerous, as I have more than once verified. A very skillful chemist, experienced in biologic work, is a necessity.

I can only say in closing that typical exophthalmic goiter has been cured by serums A, B and C, and this experience can be repeated with a serum made and administered in the same way; and if it ultimately proves to be necessary for some poor patient to die or to be operated on to obtain the pathologic thyroids of exophthalmic goiter in order that others may be saved it would indeed be a scientifically grim romance.

CASE 1.—*History.*—A. F., 27 years old, single, saleswoman, had always been nervous and excitable, and as a child remembers "hearing in her ears," the peculiar buzz or whir synchronous with the pulse which so many of these patients find annoying. She first noticed "palpitation" and dyspnea on exertion and attacks of diarrhea and shortly afterward, or when about at the age of 24, she observed the goiter and exophthalmos.

Examination.—When I first saw her in May, 1903, she had all the typical signs of the disease with a soft symmetrically enlarged thyroid, moderate exophthalmos, rapid respiration, which became dyspnea on exertion, marked pulsation of the great cervical vessels and a soft compressible pulse of 120 to 130. Her last physician had been giving her small doses of a dried thyroid preparation, which she thought made her feel a little stronger. This was stopped and small doses of potassium iodid for several weeks gave perceptible though temporary benefit to the tachycardia. When this medication had lost its effect, she received thyroidectomized goat serum by mouth, capsules of dried blood of the goat, "didymin," bromid of quinin, aconite, belladonna and many other usual and unusual medicaments, without benefit. In the winter of 1904-05 she began to lose ground and could work only a portion of each month. She finally weighed about 90 pounds and complained constantly of the heaving heart action, sleeplessness, dyspnea and weakness. There were also all the usual symptoms, with a large soft thyroid and pronounced exophthalmos and pulse of 120. She was able to walk, though with difficulty.

Treatment.—April 15, 17 and 19 she received first 5 then 10 and next 15 minims of serum A. April 17 she said the palpitation and sleeplessness during the previous night had been much improved, but there was no other noticeable change except some erythema in the right arm about the point of inoculation. After the injection in the other arm on the 19th, this erythema became much intensified and a much worse one developed around the last injection and suggested a saturation of the system with the serum. There was some fever, and she felt sick enough to go to bed. This passed in a few days, and at the end of a week there was a decided improvement.

The heaving heart action, the carotid pulsation, the sleeplessness and most of the nervousness had disappeared, and though the pulse was still about 120, it was of much better quality. At the end of another week she had gained about 10 pounds in weight and resumed her work of standing daily behind a counter.

Result.—There was a steady though not very rapid gain, which was hastened greatly by a residence at the seaside during August, and on her return the exophthalmos had entirely vanished, but a slight goiter even now can be felt, though not seen. She says that she can note by the size of her collars that each month, since the change began last spring, the neck has decreased in circumference, and at present it is as it was when she considered herself well. She now has a good figure, and looks and apparently is perfectly healthy.

CASE 2.—*History.*—E. R., aged 37, married, showed the first signs of the disease in the form of goiter, exophthalmos and tachycardia about twelve years ago. Every conceivable treatment was tried without more than temporary improvement. During these years she bore two children to full term, and during gestation the disease was scarcely noticeable, but after the birth of each child it returned within a few weeks and caused much disability. She received the thyroidectomized goat serum, the dried blood and the milk without the least benefit. Iodid of potassium in small dosage had at one time some temporary effect in slowing the pulse. Year by year the disease was very slowly but steadily becoming worse. In the spring of 1904 a bad anemia developed, which was relieved somewhat during the summer, but recurred after the winter of 1905, and in April the pulse ranged between 130 and 150 and the patient had to spend most of the time in bed. The hemoglobin was at this time 46 per cent., and the red cells 3,600,000. The exophthalmos was pronounced, and there was a large soft goiter.

Treatment.—April 25 she received 15 minims of serum A hypodermatically. As she was only my second case and in a serious condition, I fortunately awaited developments. April 30 there was a sudden attack of faintness, followed by labored breathing and dyspnea, and the heart became very irregular and apparently dilated. The pulse an hour or two later ranged between 30 and 40 to the minute, and not for another day did it rise above 40. There was nausea and some diarrhea. With careful nursing and without any medication except a little strophanthus and iron, the condition very gradually improved, and a month later she was moved to the country, where she soon became able to walk.

Result.—The "nervousness," dyspnea, sleeplessness and tachycardia reappeared at intervals during the summer, but the intervals grew longer and finally all symptoms vanished about September. The goiter, however, subsided very gradually, and at about the menstrual periods evidently enlarged a little temporarily, but each month was less perceptible and disappeared in August, but could be palpated as late as November. The exophthalmos was not noticed after August or September, and she is now a perfectly normal woman.

CASE 3.—*History.*—McQ., 37 years of age, widow, cigarette maker, has had a typical form of the disease for nine years and dated the outset from the death of one of her children. For the past winter she had been able to work at her trade only about three days a week, and she became so weak and short of breath she could with difficulty reach the dispensary. The pulse was about 130 when she was quiet, there was pronounced exophthalmos and a large firm goiter.

Treatment.—May 8, 10 and 12 she received first 5 then 7 and next 10 minims of serum A, which was not well preserved. On the 8th there was some erythema and on the 12th it was pronounced, but no perceptible improvement was noted. She disappeared and was forgotten until she came back in November in much the same condition as when first seen, but with a remarkable story. She said that after the last dose on May 10 she had been very ill with a "sore arm and heart trouble," and had been confined to bed for about two weeks; apparently a bad erythema with fever, but with no suppuration. The heart trouble seemed to have been something like a dilatation, as there had been faintness and irregular "thumping" with dyspnea and nausea. This subsided and she worked steadily at her trade all that summer. The exophthalmos and goiter had been less noticeable, but had now recurred with the dyspnea, tachycardia and weakness. The pulse was 120 in November.

November 10, 13 and 17 she received 1 c.c. of serum C, then about two months old. On the 17th a rather severe erythema followed, and for a few days she had to stay in bed for weakness, but on the 20th she resumed work. She began to feel stronger, but the physical signs remained, and during December I tried serum D, made from the normal gland by a slightly different process. Three rabbits were employed, each inoculated in the same way, but the serum from each, while giving the same general effect, varied perceptibly in the severity of the resulting symptoms. Within one or two days after the injection the pulse would rise 15 to 20 beats a minute and be accompanied by a heaving heart action perceptible under the clothing. At the same time there was some swelling of the arm, but very little erythema. The exophthalmos was increased and the general nervousness, tremor and weakness was generally intensified. In the course of four or five days these symptoms would subside, and she would feel better than before and raise my hopes and her own. But the pulse remained about 120 or a little more, and this caused me to try another rabbit: No. 320 seemed a little worse than No. 311, but both were bad, and therefore on December 29 I gave 1 c.c. of serum D from No. 68. December 31 there was considerable swelling and some erythema about the point of injection. January 1, I was asked to go to her house, and found her semiconscious, with a severe headache, pulse of 150 and somewhat irregular, with a heaving heart action and very bad exophthalmos. She was so weak she could scarcely move, and altogether the symptoms looked very serious. But the following day the condition improved, and on January 3 she was able to be out of bed. Evidently, serum D was decidedly dangerous, and produced a stimulating rather than inhibitive effect on the thyroid, and though this was noted after the administration of serum D from rabbits No. 68 and No. 311, the latter had subsequently seemed to produce some benefit at least in the subjective symptoms. No. 320, however, showed none of these feelings of betterment, and the condition which had been perceptibly improved by serum C during the middle of November had become again as bad as ever or worse.

Result.—She is still under treatment, and though the physical signs of the disease are not appreciably altered, she says she feels stronger and is able to work every day.

CASE 4.—*History.*—M. B., aged 26, single, trained nurse, had suffered from typical exophthalmic goiter for several years, but had been able to do her work. In May, 1905, she was compelled to go to bed, and in July she began to suffer from cardiac dilatation, irregular temperature, nausea, vomiting and diarrhea.

Examination.—I first saw her August 10. She was deeply pigmented, extremely emaciated and too weak to move unassisted. The exophthalmos and the firm goiter were not extreme, the breathing was labored and about 35 to the minute, the pulse was characteristic, the apex beat was in the left axillary line, there was a very plain precordial heave with each systole, and diarrhea and vomiting were very distressing. She had made all funeral arrangements, and only consented to see me on a friend's solicitation. As we had no serum ready at this time, I supplied her with some thyroidectomized sheep serum, and I think this kept her alive until serum B had been prepared, as the diarrhea and vomiting began to decrease, the respirations became a trifle less frequent and the pulse was better. Improvement was slight.

Treatment.—September 11, 13, 15 and 17 she received 1 c.c. of serum B, and on the 15th there was a severe erythematous swelling of the arm and a temperature of 103.4 F., which seems to have been made a little worse by the injection on the 17th. A marked improvement in the general condition began about this time. There were no more dyspnea, diarrhea or vomiting after the 12th, and on the 19th she was able to get out of bed for the first time since early in June. She began to walk about October 1, which was imprudent with the badly dilated heart. The pulse, though vastly better in quality, remained about 120. The goiter showed little or no

change, but the exophthalmos had nearly disappeared, and the pigmentation of the skin was fading.

October 12, 14, 16, 18 and 20 she received 1 c.c. of serum C, to hasten recovery. There was no reaction except some transient erythema, and a slight improvement in the pulse from 120 to 115, and afterward the appetite and the weight increased. October 28 1 c.c. of serum C was administered and 2 c.c. November 3 and 13 without appreciable reaction. After November 1 she began to gain a little more rapidly in strength and weight.

Result.—From September 11, when the first of serum B was administered, there has been steady improvement, until now she is able to do ordinary work without difficulty. The goiter within the last month has grown smaller more rapidly than during the previous months and has now, together with the exophthalmos, entirely disappeared, and though still a little weak, I think this patient can be honestly called cured.

CASE 5.—*History.*—E. M., aged 35, single, German dressmaker, has had typical exophthalmic goiter for about ten years. Three years ago she was forced to spend nearly the whole winter in the German Hospital, and seems at that time to have had severe symptoms, especially cardiac. She was afterward much improved, but for the past year has been able to work only at intervals.

Examination.—Her mental condition might be described as "unbalanced." There was only a very slight exophthalmos, a moderate goiter with a small cyst in the isthmus, but marked tremulousness and weakness. The pulse was between 120 and 140, soft and compressible, and there was a pronounced precordial heave.

Treatment.—September 21, 22 and 25 she received first 10 then 15 and next 20 minims of serum B without any result until September 26. Then a severe erythema developed around the point of last injection, and was accompanied by some fever and an irregular and very feeble pulse. She became unable to walk, and was sent to St. Francis Hospital, where the hemoglobin was found to be 73 per cent. and the red cells 3,700,00. With rest in bed, some improvement was noted. She received 1 c.c. of serum C October 5, 8, 10, 12, 18 and 23, without any noticeable reaction, and with a slow and very intermittent gain. October 16 the hemoglobin had risen to 82 and thereafter progress was more satisfactory. She left the hospital October 26 with a pulse of about 80, but the goiter had only decreased very slightly. During the next menstruation there was a recrudescence of all symptoms, but they subsided at its close, and since then she has been more or less steadily gaining. At constantly longer intervals there have been attacks of tachycardia and breathlessness lasting for a few hours or a day after any of the nervous strain inseparable from her trade, which involves fitting clothes on occasionally irascible customers. After one of these occasions in December she came to me very angry and with a pulse of 150, and complaining that she had been unable to sleep the previous night from worry. I gave her 1 c.c. of serum C, and a week later she reported that she had slept perfectly ever since, and I found the pulse after a quick walk 78.

Result.—At present she eats and sleeps well, has no exophthalmos and no goiter, except the small cyst which can be felt but not seen, and no tachycardia, though the pulse ranges between 80 and 90. But she is irascible, and I think slightly "unbalanced" in mind, and small incidents seem to send it up above 100. Nevertheless, I think she can be called well physically.

CASE 6.—*History.*—L. M., aged 25, single, Russian, entered Gouverneur Hospital Sept. 25, 1905, with a history of weakness, palpitation and dyspnea for the past five or six years. She had been able to be about until within a week or two. Then there had been an exacerbation of all symptoms and she came to the hospital with a temperature of 101, and a pulse ranging between 120 and 140. She became gradually worse.

Examination.—I first saw her October 27. The temperature was then 102, the pulse 148 and the respiration 44 and very labored. The heart was evidently dilated and hypertrophied, and there was a precordial heave with each systole over the whole front of the thorax. The exophthalmos was pronounced and there was a considerable but not excessively large, symmetrical firm goiter. There was marked pulsation of the cervical vessels. The dry tongue of toxemia with constant nausea, diarrhea and extreme emaciation and weakness completed the picture of the critical condition.

Treatment.—October 27, 29, 31 and November 2 she received hypodermatic doses of 1 c.c. each of serum C, then nearly three months old, without any bad reaction except a considerable local erythema. Within twenty-four hours of the first dose the nurse noted a cessation of the nausea and diarrhea, and on the following day the heaving respiration and heart action was evidently less and November 5 the pulse was 110 to the minute for the first time since September 28. There was only a gradual improvement, more evident in the general characteristics of the disease than in the recorded pulse and respiration. Temperature reached normal November 4. November 7 and 14 1 c.c. of serum C was given. On the days following these injections there was considerable local erythema and a rise of temperature to 102, but after November 20 it remained practically normal. She had thus received in doses of 1 c.c. each a total of 6 c.c. of serum C, and on November 23 all the symptoms except a slight goiter had practically disappeared, and the patient had a ravenous appetite and was beginning to be out of bed a few hours daily. Everything pointed toward a complete though slow recovery, but November 24, 26 and 28 each I gave her 1 c.c. of serum D from rabbit No. 311. The first dose was followed on the next day by a bad erythema, a temperature of 104 F., pulse of 136 and a respiration of 44. This subsided within another twenty-four hours, and the next two doses only produced a transient disturbance, but though the general condition, the appetite and the digestion remained good, the pulse continued in the neighborhood of 120 and the precordial systolic heave began to reappear. Therefore, December 6, 8, 10 and 11 each she received 1 c.c. of serum D from rabbit No. 320, without any noticeable change one way or the other. December 22, 23, 24 and 25 she received of serum D from rabbit No. 68, 0.5 c.c., 1 c.c., 1.5 c.c. and then 2 c.c. Within half an hour of the last dose she became flushed and showed an evident swelling of the thyroid, protrusion of the eyeballs very exaggerated and irregular heart action and great dyspnea. This was apparently an acute thyroidism and her condition looked alarming. But the next morning this had subsided, although she remained weak and nervous for several days and did not regain her improvement until I began the administration of another serum, which will form the basis of a future report.

Result.—At present (January 17), under the new medication, she seems to have regained the ground lost by this faulty serum D, and the pulse is again 90 and 110.

This is a somewhat remarkable instance of the extreme complexity of these sera, as only by such experiences did I realize the necessity of adhering exactly to the formula used in the preparation of serum A. Serum D was made from the normal human thyroid, but by a process which differed from the first in an almost inappreciable degree.

CASE 7.—*History.*—A. P., aged 29, single, Swedish domestic, entered the Presbyterian Hospital under the care of Dr. W. G. Thompson Dec. 11, 1905.

Examination.—She had a temperature of 102, pulse of 120, and respiration of 25 to the minute. There was a slight but perfectly plain, soft symmetrical goiter, precordial heave, marked pulsation in the cervical vessels and evident dyspnea, but no exophthalmos. She was very weak and tremulous, and had some nausea and diarrhea. She gave a history chiefly of this and "nervousness" and sleeplessness for only the past two weeks, and had therefore an acute type of the disease. The condition grew rapidly worse, and December 16 the temperature was 104, the pulse 136 and the respirations 36; the tongue was dry and hard, there was ecchymotic spots in various parts of the body and evident thrombosis in some of the veins of both legs. The picture was one of a severe and probably fatal toxemia.

Treatment.—December 16 and 17 she received 1 c.c. of serum C and on the 20th 2 c.c. of serum B and no other

medication then or afterward. There was no appreciable reaction and after the second dose there was a very marked improvement in all the symptoms. December 22 the temperature, pulse and respiration were practically normal.

Result.—Since then there has been a steady though rather slow progress toward recovery. She is up and around the ward at present with no signs of the disease, except weakness, some anorexia and a soft thyroid which can be felt, but is not perceptible to sight.

This patient has rather upset my calculations, as, judging from other experiences (in chronic cases), she ought to relapse on account of the supposed absence of the cytotoxin in the serum she received. It may prove that only the antitoxin element is needed to cure these severe acute cases, as at present she is progressing very satisfactorily.

CASE 8.—*History.*—F. L., aged 50, single, has always been a "nervous" woman, but describes the beginning of her illness to the nursing of a relative, who later died. Soon after this, in 1888, she noted an enlarged thyroid and had dyspnea and tachycardia on exertion. The symptoms continued and she became an invalid. The tachycardia only came on at intervals after exertion or excitement or sometimes spontaneously, and lasted from an hour or two up to several weeks. When in good condition physically and mentally it was not troublesome. The physical weakness was always present.

Examination.—I first saw her in October, 1905, and considered her suffering from an atypical form. She was stout, and had a large median cyst of the thyroid with some palpable but soft enlargement of the lateral lobes. There was exophthalmos, and in repose or after resting the pulse was 75 to 80 to the minute, and was soft and compressible. But after exertion or excitement the pulse beats would increase to 120 or 140 to the minute, with dyspnea and a general cutaneous "flushing." She could with great difficulty walk up one flight of stairs. There was also sleeplessness, poor appetite, fermentation, eructation of gas and frequent attacks of diarrhea.

Treatment.—October 6, 8, 10, 12 and 16 she received 1 c.c. of serum C. On the last date a severe erythema developed and prostation, irregular heart action and some fever (101 F.). She then began to improve and lose flesh. Improvement was not constant, as dyspnea and faintness with a feeble but not rapid pulse occurred from time to time. These attacks have decreased gradually in severity and frequency, and now are rare.

Result.—She now has a good appetite and feels reasonably strong, and at least goes about as any one else, and is what I call well. The cyst of the thyroid is present, but the lobes are not visible, and are not palpable except close to the cyst. The pulse is of excellent quality and not soft and compressible, and averages about 80 to the minute.

The history of this case is a type of cases in which there are only a few of the symptoms and in which this treatment ought to be helpful. Generally there is no exophthalmos, but an unevenly enlarged cystic adenomatous thyroid. The chief complaint of the patients is concerning gastric or intestinal indigestion, fermentation, abdominal or thoracic pain, often with dyspnea or labored breathing. There is also extreme weakness, occasional, frequent or constant tachycardia and a weak and compressible pulse.

CASE 9.—*History.*—M. R., aged 25, married, had been ill for about a year with typical exophthalmic goiter of moderate severity.

Examination.—There were all the usual signs. The pulse at my visit was 140 to 150, ordinarily it was about 120, soft and compressible.

Treatment.—She received November 7 and 9 1 c.c. of serum C, then about two months old. At the end of a week her pulse was about 80 and of good quality, and all the subjective symptoms were greatly improved, but there had been no marked change in the goiter and exophthalmos.

Result.—She received no treatment after this, and lately I have been informed that she is about the same as when I saw her on November 7, but that there has been much less "nervousness."

This was not a fair test, but is included with the others who received sera A, B and C.

In no instance did suppuration develop after any of the injections in these cases.

CASE 10.—*History.*—A. S., aged 23, single, stenographer, was a champion basket-ball player and an all-around athlete. She dates the beginning of her symptoms to a period of prolonged exertion and grief in 1899.

Examination.—I first saw her Nov. 11, 1905. There was pronounced exophthalmos. The thyroid was symmetrically and very much enlarged, and her thin neck measured 14½ inches over the goiter. She was much emaciated, showed a very marked pulsation in the cervical vessels, including the veins, which were prominent, and had a precordial heave over the whole left thorax. The diffuse apex beat was 12.5 cm. to the left of the median line. There was also marked dyspnea on exertion or excitement. The pulse varied from 120 to 140, and was soft and compressible.

Treatment.—November 11, 15, 17 and 21 she received 1 c.c. of serum C. November 19 her temperature rose to 102, there was a severe erythema in both arms, but mostly about the point of the last injection, and she felt sick and very weak, though the pulse was about the same (120). November 21 these symptoms had subsided, and she began to menstruate. It is worth recording that the exophthalmos, goiter and nervousness during this period, lasting two days, were all marked, but the pulse had come down to 104, the lowest for many months. The next day, November 22, it was very irregular. November 26 considerable improvement was observed. The neck measured an inch less in circumference, the thyroid was softer and the protrusion of the eyes was less marked, but to hasten recovery I gave on this day and again on November 29 1 c.c. of serum D from rabbit No. 311. Shortly after the last dose there occurred an acute exacerbation of all the symptoms, with protrusion of the eyeballs, swelling of the goiter, dyspnea and a feeling of suffocation and then vomiting and diarrhea. For a few hours the pulse was about 160. On the following day these disagreeable symptoms had subsided, and though she complained much of sleeplessness, the pulse became slower, and from December 2 to 6 did not go much above 90. December 10 some diarrhea had appeared, and I gave 0.5 c.c. of serum D from rabbit No. 320, which seemed to stop it. December 12 she received 2 c.c. of serum D from rabbit No. 320, and within an hour or two went into collapse, and her physician, who was hastily summoned, described the symptoms as those of an acutely exaggerated exophthalmic goiter. The eyeballs protruded so that the lids could not be closed at all, the thyroid was swollen, there was an alternating syncope and extreme restlessness, with an irregular and uncountable pulse, vomiting and later diarrhea. With diffusible stimulants this condition gradually subsided, and the next morning all the signs were about as they were when she was first seen November 11.

Result.—She did not care to repeat this experience, but since then she has shown considerable improvement, much to my surprise, as I thought I had undone with serum D all that had been gained with serum C.

The Physician's Personality.—In dealing with sick men, remarks *American Medicine*, the personal equation of the invalid is the thing to study. It is really as important to know "what kind of man the disease has got as to know what kind of disease the man has got," so that what seems to be trickery is merely winning confidence, on which many an invalid starts to recover at once. It's the kiss on the baby's bruise—satisfying and curative. After all, most of us only want a little sympathy when we are sick, and, like big babies, we pine if we don't get it. Patients pay well for it, and the successful doctor dispenses it with his drugs, while the learned fool, who hasn't any sympathy to spare, is a flat failure, though his treatment in other ways may be therapeutic perfection.

SURGICAL TREATMENT OF GOITER.*

ROBERT WALLACE HARDON, M.D.

Attending Surgeon Cook County Hospital and Drexel Sanitarium; Attending Orthopedic Surgeon Post-Graduate Hospital; Member American Academy of Medicine, etc.

CHICAGO.

PATHOLOGY.

For a proper understanding of the subject it is necessary to give a short review of the various pathologic conditions which affect the thyroid gland, together with a brief description of the clinical pictures presented by each.

Normally, the thyroid gland, a ductless body, is composed of a vascular stroma supporting acini which are lined with a single layer of epithelial cells. The acini contain colloid material which keeps the epithelial cells from contact.

Simple Goiter.—In simple goiter there is found only increased colloid material, causing greater distention of the acini.

Exophthalmic Goiter.—In this variety we not only find a greater amount of colloid material, but an increase of the epithelial cells causing an irregular invagination of the lining of the acini. These two varieties may be considered hypertrophies, as they represent normal thyroid conditions exaggerated. Both of these varieties show a fairly symmetrical enlargement of gradual growth.

In simple goiter the time of onset is usually between the ages of fifteen and thirty years. Primarily, it may be associated with nervous symptoms, tachycardia, palpitation and tremor, increasing for a time, but which later may subside without treatment. There is no exophthalmos.

There has been frequently noted an enlargement of the thyroid gland dating from the early menstrual period, which enlargement in some cases has disappeared without treatment before the thirtieth year. The hypertrophy may by pressure cause dyspnea, difficulty in swallowing, cough and occasionally bloody expectoration, but it should be noted that the latter are all late symptoms.

In exophthalmic goiter the age of onset is usually between twenty and thirty years. The most prominent clinical symptoms are intensified arterial pulsation, usually low blood pressure, palpitation, tachycardia, tremor, breathlessness on slight exertion and nervousness. Later the exophthalmos develops.

The other pathologic conditions of the thyroid nearly always cause tumors of irregular shape.

Acute Suppurative Thyroiditis.—L. L. McArthur says this is generally bilateral, usually following septic processes, as typhoid, puerperal fever or pneumonia. He names as symptoms sudden onset, rapid increase in size of neck, pain on motion of head, tenderness on palpation. Pressure on veins and nerves may cause a moist intense headache, hoarseness, dysphagia and even cyanosis of head and face. He mentioned as peculiar symptoms, great thirst, because of difficulty in swallowing; occasional severe epistaxis from pressure interefering with venous return, nausea, vomiting from pneumogastric pressure, hoarseness, vocal cord paralysis and dyspnea.

He advocates incision and drainage, with later enucleation of cyst, if continued suppuration. When situated beneath sternum, enucleation primarily, if the patient's condition permits, as in this locality drainage is not a safe practice.

In early fetal life the gland contains no colloid material, and the acini are filled with epithelial cells. Tumors resembling such fetal glands are named fetal adenomata.

The above and glandular adenomata, in themselves benign tumors are unlike benign tumors elsewhere, in that they are often followed by metastases, most frequently of the bones and the lungs, in the order named.

Carcinoma, sarcoma and mixed adenomata are not uncommon. If early in the enlargement bloody expectoration, painful swallowing or vocal symptoms are noted, carcinoma should be suspected. If one waits until a clinical diagnosis is possible metastases will have taken place, which will make operative interference of little avail.

Thyroid Cysts.—These may develop at any time from childhood to old age. They may be single or multiple. Bloodgood states that if an asymmetrical tumor has been present three years, and is confined to the thyroid gland, it is probably either a benign cyst, adenoma or adenocarcinoma in an operable stage.

Cysts are usually slow of growth, but may at any time grow rapidly. They may also vary in size from time to time. There seems to be no relation regarding these growths in the female to puberty or to pregnancy or the monopause.

Clinically, some of the patients exhibit no symptoms except the deformity caused by the growth. While others have atypical symptoms of exophthalmic goiter, which often disappear after the removal of the cyst, as in Case 2. They may cause annoying pressure symptoms.

In a series of cases of this class subjected to operative treatment at the Johns Hopkins Hospital there were no serious postoperative complications or mortality.

In considering the surgical treatment of goiter it should be remembered that the vast majority of cases coming to the surgeon have had the benefit of medical or electrical treatment, or both, for a greater or less length of time, and not receiving the relief desired, or growing more uncomfortable, come for advice and treatment. The foregoing leaves practically only the colloid variety to be considered. The class of cases which come to the surgeon bear a striking similarity to the class of cases of appendicitis which he saw but a few years ago, when the patient, neglected, was allowed to pass on from a condition in which there was but a fraction of a percentage of mortality to one where the percentage was great. In reviewing the literature in which cases have been reported in the last five years one can not help being impressed with the above fact. Mayo reports 128 operations, with eight deaths. Eliminating one cancerous and two "who should not have been operated on, as their condition was so aggravated as to almost class them as moribund previously to operation," the mortality rate is low for a class of cases, most of which had been given up after treatment by internists, since the process could not be made to recede, could not be checked, and did in the large majority increase in danger to and loss of virility of the patients. The deaths in cases of Curtis, Kocher, Witherspoon and others all show alike the increased mortality from this same cause.

Mayo further states: "During the past year two such cases were seen with regard to the advisability of operation, but with a knowledge born of bitter experience both were refused. One died in a week, the other lived a few weeks; both deaths were medical." Do we wait until the belly is full of pus and the patient nearly moribund before advising operation for the removal of an ap-

* Read before Fox River Medical Society.

pendix? Should the advising physician any more stand by and see death spreading out its arms by refusing a patient surgical aid when other measures have shown themselves to be of no avail?

OPERATIVE METHODS.

1. Injection is by many considered as dangerous as any of the other methods.

2. Ligation of the thyroid arteries is as dangerous as removal of the gland, except that in some cases it may take less time than an extirpation.

3. Resection of sympathetic ganglion. Jonnesco reports fourteen cases of bilateral sympathectomy, with no deaths. He resects all cervical and the first thoracic ganglions and believes it to be the operation of election in primary exophthalmic goiter. However, in exophthalmic goiter of long standing he would first do a partial thyroidectomy, and if improvement is not noted in a reasonable time, sympathectomy. Curtis reports three deaths in eleven cases. He says that this method gives good results, but sufficient time has not elapsed to show their permanency. There are many who believe that the destruction of the efferent lymphatics by this method accounts in a large measure for the improvement.

Improvement from the *x*-rays probably acts to some extent in the same way, according to Mayo and Murphy. Mayo frequently uses it in conjunction with other treatment from two to six weeks previous to operation.

Thyroidectomy.—Kocher reports four deaths in fifty-nine cases of thyroidectomy or ligature of the arteries. Witherspoon, nine cases, with one death. He says it is an operation which gives the greatest satisfaction and removes the lobe most affected, usually the right. Improvement is noted almost at once. Curtis reports seven cases, with two deaths. Mayo, before noted, reports 128 cases, with eight deaths.

A certain percentage of cases suffer from acute thyroidism following this operation, due in part to trauma of the remaining portion of the gland, its subsequent weeping into the wound and absorption. In May of this year the Mayos were practicing cauterization with Harrington's solution to reduce this effect

The Kocher collar incision gives the best opening, with the least resulting disfiguration, and extends across the neck, if necessary, to the external border of the sterno-mastoid muscle. If necessary, this muscle can be cut, to be sutured later; so with the sterno-hyoid and thyroid muscles. In dissecting it is best to try to keep just inside the capsule. This will usually be found to be very thin anteriorly, and laterally, but thicker posteriorly. Bleeding points are caught with forceps or tied until the gland is separated, first superiorly the superior thyroid artery and vein being located, double tied and cut between. In dissecting below on the right side one must use care not to injure the recurrent laryngeal nerve, which lies in intimate connection with the inferior thyroid artery. This danger is avoided if dissection is confined to the inner side of the capsule. The lobe dissected off, the isthmus and a part of the opposite lobe may be removed if necessary. The preservation of capsular tissue at the stump end, so that the stump may be covered in, and the removal of any loose lobules, is a point in the technic which goes far toward reducing the tendency to acute thyroidism. The wound, clean and dry, is closed except for an opening left for drainage. After operation the patient should be given salt solution subcutaneously, and this should be repeated at suitable intervals, if the patient has lost much blood or is anemic, to prevent absorption from the wound.

Should thyroidism occur, suprarenal extract given in small repeated doses and atropin and morphin give the most satisfaction.

Just a word as to anesthetics. Local anesthesia has an advantage in that the patient tells at once if the recurrent laryngeal nerve is caught, and can be used in all cases where a general anesthetic is contraindicated.

If, previous to operation, morphin is given, light general anesthesia is safe in the majority of cases suitable for operation.

I have never seen scopolamin used in this class of cases nor have I found any reports of its use.

The results of all operators are practically the same. Marked improvement in from 40 to 60 per cent. of cases almost at once, and in nearly all of the rest in a few months following operation. In exophthalmic cases the exophthalmos is the last symptom to disappear.

CASE 1.—Mrs. S. W., aged 39; two children; born in Sweden; came to United States at age of 17 years; housewife.

History.—First noticed enlargement of neck twelve years ago, which had gradually increased in size up to two years ago, when it grew more rapidly, attaining such size as to cause marked deformity, hoarseness and at times difficulty in swallowing. During the three weeks previous to operation the pulse averaged 108, the extremes being 96 and 124. About eighteen months before operation she had begun medical treatment, which consisted of electricity and injections, these covering a period of about five months. About two months after, having no relief, she changed advisers and was given thyroid tablets, which she took for a period of about three months without relief; indeed, being more nervous at times than before. When first referred to me she complained that at times she was very nervous, without any apparent or only slight cause.

Operation.—On April 18, 1903, entire right lobe, isthmus and about half of left lobe were removed under ether anesthesia.

Pathology.—Colloid hypertrophy of the thyroid. Patient made uneventful recovery. In September of same year patient's nervous condition was much better, and pulse at five different times averaged 92, the extremes being 86 and 104.

CASE 2.—Miss T. B., aged 32, was born and lived in Illinois all her life. Dressmaker for eight years.

History.—Patient had marked swelling of right lobe of thyroid for four years, with extreme nervousness and tremor, and had been treated for chronic indigestion because of many attacks of vomiting and diarrhea. At first visit, about six weeks before operation, pulse varied during one hour from 108 to 136. During the four days previous to operation pulse had extremes of 104 to 138. There was no exophthalmos.

Operation.—On May 3, 1903, under ether anesthesia, nearly the whole of the right lobe was removed. Three months subsequent to operation the tremor had disappeared, the patient was much less nervous and the diarrhea and nausea had disappeared.

Pathology.—Cyst of thyroid gland. Cyst fluid slightly discolored and thin. Specimen was lost in transit to laboratory, so no microscopic examination was made. Patient was seen Dec. 15, 1905; pulse, 88; weight increased seventeen pounds, and says she feels perfectly well.

CASE 3.—Mrs. H. W. T., aged 44, was born in Illinois and had lived in Iowa thirty-eight years.

History.—History of tremor, nervousness, nausea, vomiting, diarrhea, for four years. During the past six months the eyes were noticed to be moderately prominent. The pulse was said to run at times as high as 148. When first seen it was 126 to 134. The thyroid gland was only moderately enlarged; slightly more prominent on the left side.

Operation.—On Feb. 16, 1904, under cocain anesthesia, the left lobe and isthmus were removed. Except for the day following the removal, when patient's pulse went to 126, the temperature to 102.8 and there was extreme restlessness, the recovery was uninterrupted.

Pathology.—Sections showed typical invaginations of exophthalmic goiter.

On June 16, 1905, the following was received: "Your patient is fine. Her eyes have lost their prominence so much that it is hardly noticeable. She weighs 141 pounds" (weight at time of operation, 118). Her other symptoms have been so relieved that she had not called on the doctor for attention for over three months.

CONCLUSIONS.

1. Every irregular tumor of the thyroid, no matter how small, should be removed, as only by following this line of procedure can we hope to save the lives of those having malignant growths.
2. Every regular tumor of the thyroid causing symptoms other than deformity should be resected when, after a few months' medical treatment, its growth is not checked, and no improvement is shown.
3. Avoidance of trauma, care of the stump, free drainage and salt solution to keep full blood and lymph vessels, to prevent as far as possible wound absorption.

MUCOCELE OF THE APPENDIX.

WITH REPORT OF A CASE POSSIBLY CARCINOMATOUS IN NATURE.*

ALFRED STENGEL, M.D.

Professor of Clinical Medicine at the University of Pennsylvania.

PHILADELPHIA.

The somewhat indefinite term mucocele may be retained because it sufficiently suggests the general characters of a condition, the exact nature of which is probably not always the same. In some cases the pathology seems clear; in others there is much uncertainty as to the process of formation; but in all there is a cyst-like appendix with mucoid contents. Such cysts, and in fact all kinds of cysts, of the appendix are comparatively rare. According to Kelly and Hurdon, Ribbert found six cases among 400 autopsies; Bryant, one case among 124 autopsies; Steiner, three among 2,286; Bordy, one among 528, and they themselves found sixteen cases recorded among 3,770 autopsies at the Boston City Hospital. I have seen but one well-defined case, that herewith reported, among about 2,000 autopsies.

The appearance of the diseased appendix is that of a rounded or pyriform cyst with a more or less definite constriction of the proximal portion of the organ. Sometimes the distal part or tip alone is dilated; in other cases the whole appendix is enlarged. The lumen may be completely occluded at the cecal end or merely narrowed. In some of the cases the obstruction was due to a kink produced by a bend or by a fibrous band. In one, at least (Treves and Swallow), the cyst contents flowed out when the appendix was straightened.

The contents of the cysts are either of a muco-purulent, sero-mucous, serous or purely mucoid character. Occasionally they are blood-tinged. A review of the reported cases will show that in all probability the cysts are of different pathologic character. Some are undoubtedly merely inflammatory retention cysts, caused by occlusion of the mouth or proximal part of the appendix. A number of such have come under my observation, all being of moderate size and quite evidently of inflammatory origin. Exceptional cases, however, may be of such size and may have lost the characters of inflammatory retention cysts to such an extent that they may be classified as cysts and may admit of much doubt as to the mode of formation.

* From the William Pepper Laboratory of Clinical Medicine, Phoebe A. Hearst foundation.

LITERATURE.

Leube,[1] in referring to these inflammatory retention cysts, states that the contents at first consist of tenacious mucous, and that later the sac contains only a watery serum, because when the appendix becomes much distended its wall becomes thinned and its vessels more superficial. Thus the watery portion of the blood may escape more easily, and the formation of mucus is reduced to a minimum (*hydrops processus vermiformis*).

Sonnenberg,[2] in referring to hydrops of the appendix and to retentive cysts, after detailing the results of obstruction of the appendix, states that the retained secretion does not always cause a severe disease of the appendix. If the obstruction occurs at a time when the lumen of the appendix is free, or when virulent microorganisms are not present, there is no decomposition of the secretions. A continued accumulation of secretion takes place and overdistension of the appendix in the form of a retention cyst may occur. The mucous membrane becomes compressed, epithelial cells are thrown off and the connective tissue elements hypertrophy. The muscular and serous coats of the appendix also thicken. Hernious protrusions of the mucous membrane through the muscular layer are occasionally met with, as in the case described by Kelynack and Ribbert. Such protrusions are also found in cases reported by Shoemaker and Kelly and in my own.

Among others the following reports refer to cases supposed to have had this character of retention cysts:

Wenzel-Gruber[3] describes a case in which the appendix was 10 cm. long, the spherical sac at the top being 4.2 cm. long, the constricted neck 1.8 cm. and the pedicle or proximal portion 4 cm. in length. The diameter of the sac was 5 cm., of the neck 2 cm. and of the pedicle 1 cm. The wall of the sac was from 2 to 3 mm. thick, as were the walls of the proximal portion. The serosa was thickened, the muscularis hypertrophied and the mucosa convoluted. The cyst was filled with viscid glassy mucus. The patient had tuberculosis of the lungs and intestines. The author notes that the opening of the appendix into the cecum, 1 mm. in diameter, was very small, but must have been thus narrowed by the chronic inflammation.

Feré[4] presented a mucocele of the appendix, found at autopsy on a man 55 years of age, dead of disease of the kidneys. The appendix was sigmoid and fusiform, with a circumference of 9 cm. at the central dilated portion. The length was 10.5 cm. The appendix was quite free from adhesions and normal in color. On opening the cecum there was seen a fluctuating tumor the size of a walnut, covered with reddish mucous membrane, which was almost ecchymotic in spots. The contents of this tumor were continuous with the contents of the appendix. On section of the unthickened walls of the appendix a colorless gelatinous mass, resembling boiled starch, was turned out. This was found to be composed of mucin and a few cells. The mucocele was probably consequent on an obliteration of the appendiceal opening, due to ulceration of the mucous membrane at this point. The tumor distended the wall formed by the mucous membrane of the cecum and the appendix, and thus produced the intracecal tumor. The condition had caused no symptoms.

1. Ziemssen's Cyclopedia of the Practice of Med., vol. vii, p. 361.
2. Path. u. Therap. der Perityphlitis. Leipzig, 194.
3. Arch. f. Path. Anat. u. Physiolog., 1875, vol. lxiii, p. 97.
4. Progres Med. Paris, 1877, vol. v, p. 73.

Other cases of cysts or of dropsies of the appendix are referred to by Bossard, Kraussold and Ribbert; and Wölfler describes a cyst found in an operation for herniotomy and which, on consideration of its characters, seemed to be a cyst of the appendix.

Bristowe[5] calls attention to dilatation of the appendix which may occur when its orifice is obliterated or obstructed. "Then the appendix becomes elongated and plump (perhaps as thick as the little finger), presents often false diverticula (resembling, on a small scale, those of a sacculated bladder), and is distended with a glairy transparent fluid, the secretion of the mucous membrane."

Treves[6] states that it is common to find the fore end of the appendix greatly enlarged and distended from the retention of mucus and other matters in the distal end of the canal.

Kelynack says that this has not been his experience. He refers to one case under his own observation and to Fenwick's case,[7] in which "the appendix was distended by a milky fluid, the communication with the cecum being obliterated."

Maylard[8] describes a retention cyst of the vermiform appendix from a patient who had died of chronic Bright's disease. The appendix was free, four inches in length, normal for its proximal two inches, "but the distal portion was dilated into an egg-shaped, tense, cyst-like structure." The dilated part was shut off from proximal portion which communicated freely with the cecum. A mass of clear gelatinous substance was turned out of the cyst, leaving behind some "white, creamy-like material, in which was embedded a small calcareous concretion." The peritoneal surface was deeply injected with blood vessels. Maylard notes that Coats[9] has described a similar specimen.

Shoemaker[10] describes a cystic condition of the appendix, discovered postmortem, not having given rise to symptoms during life. The cyst of the appendix was 4 inches long and 1¼ inches in its broadest diameter. "A small portion of the distal end was not dilated, and at about the broadest portion of the cyst was a thinned area seemingly about to rupture." The cyst contained a "clear jelly-like mass."

Biggs[11] reports two cases of stricture of the appendix. One appendix was 9 cm. long and 2 cm. in diameter, and the lumen was occluded .5 cm. from the origin by firm fibrous bands. "The contents of the appendix measured 2 drams, were of a slightly pinkish color, and consisted of fat globules, granular matter, and cholesterin crystals." The second appendix was obstructed by a kink near the tip, produced by traction of the peritoneum.

Hawkins[12] reports 2 cases of a condition which he calls "cystic appendix," which were cases of empyema of the appendix. He thinks these cysts may be caused by obstruction of the lumen due to kinking of the tube by an acute bend. He refers to a case reported by Treves and Swallow[13] in which the cyst was 2 inches in length, very hard, and filled with mucus, which escaped when the appendix was made straight after its removal. The bent position had been maintained by old adhesions.

It is somewhat remarkable that in almost all the cases the condition was discovered accidentally at operations or autopsy or at least had occasioned no pronounced symptoms. If the accumulating liquid is of inflammatory nature, one might expect, in a greater number of the cases, active clinical symptoms, especially as the cysts often reach considerable size and not rarely have been attached by adhesions to surrounding structures. There is little doubt, however, that most of these cases were probably of inflammatory origin.

In some cases, a tumor was recognized in the right iliac fossa or the growth was of such size as to have made it probably palpable during life.

Coats[14] mentions a case in which the appendix had been converted into a large cyst, measuring 5 inches in its long diameter. The cyst contained a tenacious material and the wall was thick and firm.

Wilks[15] saw a case in which the appendix was dilated to the size of the ileum and distended with 3 or 4 ounces of white odorless mucus.

Wien[16] reports a case of cystic degeneration of the appendix vermiformis, which caused a tumor in the right iliac fossa. There was great swelling along the crest of the ilium, and an opening near the posterior spine of the ilium, from which 3 or 4 ounces of quite clear mucus, occasionally stained with pus, were discharged daily. The discharge was said to look almost exactly like vitreous humor.

Guttmann[17] reports a specimen of enormous hydrops of the appendix, found on section of a woman 70 years old. The vermiform appendix was 14 cm. long and 21 cm. in circumference, and the opening into the cecum was completely constricted by strong fibrous bands produced by chronic inflammation of this part of the appendix. The secretion of the mucous membrane had become quite watery.

Montgomery[18] describes a cyst of the appendix found in a woman during the operation of panhysterectomy. The cyst was 5½ inches long and 4¾ inches in its largest circumference. The contents were "apparently thin and watery." The cyst was removed.

Deaver's[19] case presented a cystic dilatation of the appendix, the size of a small orange, which was adherent both to the neighboring coils of small intestine and to the right broad ligament. The lumen of the appendix was entirely occluded ¼ of an inch from its cecal end. The contents of the cyst were quite clear and somewhat tenacious. The author says that the mucous membrane is usually smooth and generally greatly atrophied as a consequence of mechanical pressure. There is also marked atrophy of the lymphoid follicles. If the distension be but moderate, it is not uncommon to find the wall much thickened as a result of compensatory hypertrophy of the muscular coats and also of some connective-tissue hyperplasia.

Occasionally, as in a case reported by Fowler,[20] there are active symptoms which necessitate operation. In Fowler's case the dilated portion, about the size of a small walnut, was at the distal end. There were no adhesions.

Though accurate studies of the pathology of the appendix have until recently been wanting, and especially in the class of cases above referred to, it is very probable

5. Reynold's System of Medicine.
6. Lancet, Feb. 9, 1889, p. 268.
7. "Clinical Lectures," 1889.
8. Trans. Glasgow Path. and Clin. Soc. vol. iv, 1891-3, p. 111.
9. "Manual of Pathology," 2d ed., p. 753.
10. Occident. Med. Times, 1892, vol. vi, p. 387.
11. Med. Rec., 1893, vol. xliii, p. 536.
12. "Diseases of the Vermiform Appendix," London, 1895.
13. Lancet, Feb. 9, 1889.
14. Glasgow Med. Jour., 1875, vol. viii, p. 126.
15. Quoted by Fagge, vol. ii, p. 174.
16. Med. Rec., 1880, vol. i, p. 44.
17. Deutsch. med. Wochft., 1891, vol. xxii, p. 260.
18. THE JOURNAL A. M. A., vol. xxix, p. 174.
19. "Treatise on Appendicitis," Philadelphia, 1900.
20. "Treatise on Appendicitis," Philadelphia, 1894.

that most of the cases cited were retention cysts with inflammatory contents. Every one who has studied series of appendices must have encountered minor grades of cystic distension with contents of mucopurulent character. More advanced stages may cause empyema, and hydrops may occur in the appendix, as in the gall bladder.

There is, however, some reason to believe that there exists a quite different sort of dilatation of the appendix with which the inflammatory form may readily be confused. Long ago (1867) Rokitansky reported four cases which he regarded as instances of colloid cancer and in which the gross appearance was that of cysts of the appendix. Virchow described these cases as colloid degeneration and figures one in his "Krankhafte Geschwülzte."

In Rokitansky's series of cases[21] the appendix was transformed into a thick-walled cyst, varying in size from 2 to 6 cm. in length and from 1 to 2 cm. in diameter. The wall was made up of fibrous tissue, which replaced the coats of the appendix. The inner portion of this capsule was a loose areolar layer, with brownish pigment here and there, and in places it was lamellated. His observations pointed to the fact that this layer might be the remains of an atrophied reticulum. The contents of these appendices consisted of a whitish-yellow gelatinous substance, supported in two cases by a fine reticular network, with small rudimentary blood vessels visible in places. After considerable discussion of the subject, Rokitansky comes to the conclusion that this affection is a colloid-cancerous degeneration of the appendix, and that the tension of the mass of gelatinous carcinomatous material causes a dilatation of the walls of the vermiform process, with a consequent transformation into a fibrous capsule.

At the time of Rokitansky's report little was known regarding the occurrence of carcinoma of the appendix, only two cases, those of Merling (1838) and of Prus (1865), having been reported. Recently, however, a considerable number of cases have been recorded, and Kelly and Hurdon tabulate a total of 52, including 2 which were designated endothelioma. They refer to Rokitansky's cases, though erroneously stating that these were not examined histologically.

In 1884, Draper[22] reported a case of colloid cancer of the appendix vermiformis. "The upper third or head of the appendix was enlarged and dilated to such a degree that externally it was of the size and shape of a large plum; its cavity, deeply injected, was irregular in its surface, and would admit the little finger. The opening to the intestine from the appendix was also dilated. The thickened wall of this enlargement presented the characteristic appearances of colloid disease." The tumor had caused symptoms and was probably the cause of death.

The features of this case differed somewhat from those usually described. The thickening of the walls of the diseased appendix and the dilation of the cecal opening contrast strongly with the usual conditions.

Vimont[23] reports a case of mucocele of the appendix, found at the autopsy of a woman who had been operated on for bilateral gelatinous cysts of the ovary, which had ruptured into the peritoneal cavity. The tip of the appendix was found attached to the uterine cornus. The shape of the appendix resembled that of the stomach, with the small end attached to the cecum by a small pedicle. The appendix was 11 cm. long and 12.5 cm. in circumference at the larger extremity. The contents were gelatinous, like boiled starch, and weighed 38 grams. The walls of the appendix were thickened, whitish, and at one place presented two small papillomatous masses. The author asks if this dilatation may not have been due to compression caused by the ovarian cysts.

This case even more definitely establishes the neoplastic nature of certain mucoceles.

Baillet[24] exhibited a cyst of the appendix found during an operation performed to remove a papillomatous ovarian cyst. The orifice of communication with the cecum was occluded. The cyst was found to be made up of mucoid tissue, embedded in which were many large cavities lined with non-ciliated cylindrical epithelium.

PERSONAL CASE.

The case which came under my own observation occurred in a woman aged 50, who had had glycosuria for a number of years and finally died of rapidly developed acidosis. I had not seen her during life, but made the postmortem examination, at which the enlarged appendix was discovered.

Autopsy.—Performed March 18, 1899.

The body was that of a very large white woman, probably 5 ft. 10 in. in height, and quite fat. Rigor mortis was well developed. On section into the body, the subcutaneous fat was found excessive, being in places as much as an inch and one-half in thickness. The fat itself was of a light yellow color, and the muscles were rather lighter colored than normal. The pleural cavities were free of exudation, and there were no adhesions. The anterior mediastinum was occupied with a considerable excess of fat, so that the heart and pericardium were completely covered. On section into the pericardial sac, a little clear fluid was discovered. The epicardium contained an excessive deposit of fat at the auriculo-ventricular furrow on the right side and over the root of the great vessels, but not much anywhere else. The coronary vessels were distinctly seen as white streaks, the whiteness being due to the fibrous character of the walls of the vessels. The root and larger branches were so sclerotic that when cut transversely and compressed they immediately sprang open from the stiffness of their walls. The heart muscle was flabby on both sides, and there were some fatty patches here and there. The endocardium was white in places, and there were marked patches of atheroma in the anterior mitral leaflet, as well as in the root of the aorta around the mouths of the coronary vessels and at the edges and floor of the sinuses of Valsalva. The valvular orifices were normal, as were also the leaflets of the aortic and pulmonary valves. The tricuspid leaflets showed slight thickness at the edges.

The lungs were congested at the bases and somewhat edematous, but there was no marked change.

The abdomen contained an immense quantity of fat in the mesentery and omentum. The gastro-intestinal tract presented no abnormalities, except in the region of the appendix. The latter was found greatly distended in a somewhat cystic fashion, and at one point a small hernious protrusion of the mucosa, through a defect in the serous and muscular coats, causing a clear vesicular projection of about the size of a grape seed, was discovered. The mouth of the appendix seemed to be occluded, but the bowel was kept unopened for subsequent dissection. The coils of intestines were everywhere more or less matted together by thin, veil-like adhesions, but there were no gross adhesions of any sort.

The liver was much enlarged and compressed by the ribs (*Schnurr Leber*). On section, its substance was rather flabby, and spots and streaks of light color were discovered. There was evidently some slight sclerosis and also a considerable degree of fatty change.

21. Med. Jahrb., Wien., 1867, vol. xlii, p. 179.
22. Boston Med. and Surg. Jour., 1884, vol. cx, p. 131.
23. Bull. Soc. de la Soc. Anat., Paris, 1887, vol. lxii, p. 608.
24. Bull. de la Société Anat. de Paris, 1891; 55, vol. v, lxvi, p. 67.

The pancreas was soft and presented no macroscopic change.

The spleen was enlarged, fully twice its normal size, and the capsule was rather hard. The substance was soft and rather light in color, with spots of dark, almost hemorrhagic, appearance. The splenic artery was atheromatous in a high degree, and the splenic vein greatly increased in size. The kidneys were a little enlarged. The cortex was rather wider than normal, and the substance deeply congested. There was no definite visible disease. The suprarenal capsules were normal.

The abdominal aorta and its branches, as far as they could be felt, were sclerotic, though much less so than the splenic artery.

The uterus and its appendages were normal.

Description of Cyst.—The appendiceal cyst was found to be about 2½ inches in length and a little over 1 inch in diameter at its thickest part, which was near the middle of the organ. The cyst extended from the cecum to the tip of the appendix. At the cecal attachment the lumen was occluded and the expansion to the cyst was sudden, as if a much enlarged appendix had been constricted at its origin by a tightly drawn encircling ligature. The unopened cyst was quite firm and elastic, giving the impression of a sac tensely distended with gelatinous matter (Fig. 1). The wall was white and glistening on the outside, and the small blood vessels showed plainly in the serous covering. On transverse section, the cyst was found to be of semi-solid consistence; its walls tough and fibrous, 1 to 2 mm. thick, and in most places cleanly separated from the whitish or opalescent gelatinous contents (Fig. 2). The latter were easily shelled out when the thickness and firmness of the walls prevented their collapse, leaving a firm shell.

Microscopic Examination.—Microscopic examination showed the wall or capsule of the cyst to consist of a thickened and fibrous muscularis and serosa (Fig. 3). The submucosa was of loose areolar character, containing considerable leucocytic infiltration and new-formed spindle cells. The mucosa was nowhere intact. In its place was found a layer of varying thickness, composed of polymorphous epithelial cells without definite arrangement. Generally this epithelial lining was thin and in some places wanting; in a few places it was more massive, and at such places there could be traced into the gelatinous cyst contents, irregular extension of columns or strata of epithelial cells.

Cyst Contents.—The contents of the cyst were made up of a lamellated gelatinous substance of compact character. Between the lamellæ were found cells (leucocytes) and many minute spherical bodies staining deeply with hematoxylin (calcareous spheres, Fig. 4), and here and there masses of irregular epithelial cells or less frequently ill-defined glandular acini. While the epithelial cells were more numerous near the periphery, that is, just within the capsule, they could be found at the very center and scattered everywhere through the gelatinous substance. There was no evidence of a well-developed reticulum, but in places the irregular course of the gelatinous lamellæ and the presence of short strands of spindle cells lying end to end suggested an old reticular arrangement. Nearly all the cells within the gelatinous material were degenerate, the groups of epithelial cells in particular.

The appearances strongly indicated some active cellular process with mucoid degeneration rather than an exudation from a diseased, but more or less intact, mucous membrane. The presence of acini deeply embedded in the gelatinous material and of irregular heaps of polymorphous epithelial cells further confirmed the suspicion that the process was akin to that of gelatinous carcinoma elsewhere.

There was no evidence in any of the sections of invasion of the walls of the appendix by a heterotopic epithelial process, though here and there in the submucosa small collections of epithelium-like cells could be identified. It is possible that a more extensive sectioning of the appendix might have discovered definite invasion, but at the time when the sections were made no suspicion was entertained of a possible malignant nature of the condition.

It may be recalled that in some of the reported cases, such as that of C. C. Norris,[25] but little invasion of the walls was evident, the growth appearing, in the main, as a mass within the lumen of the appendix.[26]

Chemical Examination.—Chemical examination of the contents of the cyst showed the presence of considerable quantities of calcium which the microscopic examination had indicated. The fact that the mucoid material was a mucoproteid of the same general character as those met in gelatinous tumors of the ovary and the like seems to me of some importance, though not a certain proof of the nature of the condition.

Dr. Edsall reported his chemical study of the cyst contents as follows:

"The substance from the interior of the appendix was (after preservation in alcohol) of somewhat the same consistency as a dense jelly. It was of grayish-white color, partially opaque. It was soluble in water, forming a slightly glistening solution. On boiling, the solution became opalescent, but did not coagulate. It did not coagulate on the addition of acetic acid. Absolute alcohol produced a precipitate which was still readily soluble in water after standing under alcohol for more than 24 hours. After boiling with 2 per cent. sulphuric acid, the substance reduced Fehling's solution readily. The lack of coagulation after adding acetic acid is sufficient to indicate that it was not mucin; the solubility in water distinguished it from colloid. The reactions are those characteristic of pseudomucin. After allowing the preserving alcohol to evaporate from two small portions of the substance, these portions were weighed, incinerated, and the calcium of the ash determined. In the two instances the weight of the calcium (as Ca O) was, respectively, 1.1 per cent. and 0.85 per cent. of the total."

It must be admitted that the nature of the process in the appendix I have described is somewhat uncertain. At first I was disposed to think it simply a dilated appendix filled with mucoid material unusual in amount and character. Closer study, however, and in particular the discovery of irregular acini, epithelial tubular structures and collections of epithelial cells scattered everywhere through the gelatinous substance made me suspicious that the condition might be allied to colloid carcinoma. A review of the scant literature of the subject and especially the features of the cases reported by Vimont and Baillet seem to lend some support to my suspicion.

DISCUSSION.

DR. WALTER L. BIERRING, Iowa City, Iowa, said that he had seen only one case that bore any resemblance to the interesting condition described by Dr. Stengel and this was evidently not identical. An enlarged appendix, obtained at operation, measured 3½x1½ inches, and resembled a retention cyst, the entire mass having an elliptical form. The content was composed entirely of gelatinous mucoid material; at first it was thought to be purely an evidence of a perverted secretion of the lining epithelium due to chronic inflammation, following which the excessive mucoid substance had become retained in the dilated appendix, but the fact that portions of the mucosa and the other coats of the appendix were replaced and invaded by this same material made it appear, in part at least, like a retrogressive tissue change. Dr. Bierring said that the question

25. University of Penna. Med. Bull., 1903.

26. Since the above was written, an interesting specimen has been shown me by Dr. A. J. Smith, to which I am permitted to refer by his and Dr. B. C. Hirst's courtesy. Dr. Smith writes as follows:

"Appendix was removed in Howard Hospital in June, 1905, by Dr. B. C. Hirst, from a negro woman; character of case was not appreciated prior to operation. The woman was supposed to have fibroid pelvic growths. At operation both ovaries were found much enlarged and the seat of widely infiltrating papillary adenocarcinoma, with surface papillary extensions, with both tubes and peritoneal surface of uterus similarly involved. Appendix was free, short, with smooth and pale and glistening exterior, but with distal extremity distended into a small rounded cyst-like dilatation. On section the latter was found filled with clear mucus, the walls grossly showing no thickening save at one or two points where there were tiny white subserous nodules, which may possibly be foci of starting invasion from the cancerous growth of the genitals."

The appearance of the gross specimen was strikingly similar to that of my own.

naturally arises as to whether the original process in the case Dr. Stengel reported was not neoplasm, carcinomatous in character, in which the epithelial elements had become completely replaced by the mucoid material. He thought the condition certainly unique, and regarded the name proposed, mucocele, as distinctive as any that could be suggested.

Fig. 1.—Slightly reduced view of the cecum (*a*) and appendix (*b*). The mesentery of the appendix was heavily loaded with fat (*c*).

Fig. 4.—Calcareous spheres imbedded in the gelatinous substance within the appendix. Zeiss. oc. 1; obj. 1/12. Specimen stained with hematoxylin.

Fig. 3.—Section of the wall of the appendix and part of the substance within. Toward the center of the appendix is seen (*a*) an acinous or section of a glandular tubule; at (*b*) an irregular mass of epithelial cells suggesting by its position and the relations of adjacent structures that it had been separated from the mucosa. No remains of normal mucous membrane are observable.

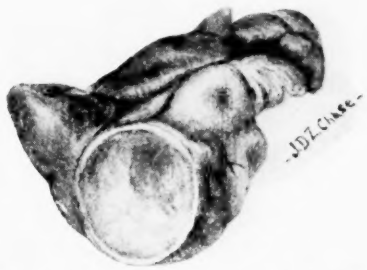


Fig. 2.—Transverse section of the appendix showing the stiff walls and opalescent mucoid contents. Life size.

The Value of Brief, Pointed Practical Articles.—Dr. George J. Monroe said in the *Cincinnati Lancet-Clinic* about a paper which he wrote: I am not gifted with a large vocabulary of words, yet on reading the first paper I prepared I found that it took me fifty-four minutes to read it. I had not then said all I wanted to. I began to eliminate and condense. I rewrote the paper. I found that it took thirty-two minutes to read this paper. Again I rewrote the paper, and on reading it this time I found that it only required nineteen minutes. I compared this paper with the first and second, and I was surprised to find that I had really said more than I had in either of them. This will apply to the majority of papers read before medical associations. The greater number of them could be materially condensed and yet contain all that is expressed in the long papers. How many papers we find that are filled with useless matter that has no relation to the subject. What cares the busy doctor about a lot of statistics and data (that have been published elsewhere and that can be looked up by anyone interested)? We want to learn the best way to diagnose and treat these diseased conditions.

PLEXIFORM NEUROFIBROMA.*

FRANK B. WYNN, M.D.
INDIANAPOLIS.

The plexiform type of neurofibroma is considered by Recklinghausen, Kyrieleis, Kriege, Hurthle, Teichert, Westphalen and others to arise invariably from the connective tissue of nerve trunks. In opposition to this view, Lahmann maintains that such neoplasms may not only originate in the connective tissue of the nerve trunks, but also from that of the blood vessels or of the skin glands or hair follicles as well. His findings have been corroborated in whole or in part by Philippson, Du Mesnil, Verneuil and Löwenstein. Bearing on this mooted question, the following case may present some features of interest:

Family and Personal History.—R. E., the unfortunate subject of this report (Fig. 1), is aged 19 years. His parents,

Fig. 1.—Photograph of the patient.

five brothers and two sisters are living and healthy. There is no hereditary taint. His training in an institute for the blind was thorough, and, all things considered, he is exceptionally bright and well formed. He has never suffered from any malady except the one described.

History of Case.—Undue prominence of the eyeballs was noted at birth. Almost at once there developed a catarrhal conjunctivitis, accompanied by extreme photophobia. Later keratitis arose, followed by ulceration of the cornea with subsequent fibrosis. From all that can be learned blindness must have supervened at a very early age.

Swelling of the eyelids, especially the upper, was an early manifestation, as indicated in a photograph taken at 2 years of age. At 8 the eyes were closed. Three years later (1897) the bulging and bagging of the upper lids became so great that surgical measures were instituted. A large section of the redundant skin was removed with a lemon-sized mass of neoplastic tissue from either orbit. Gradual recurrence of the growth followed the operation.

* Read in the Section on Pathology and Physiology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

Fig. 2.—Plexiform Neurofibroma. Showing arrangement of five cords around the large vessel (×12).

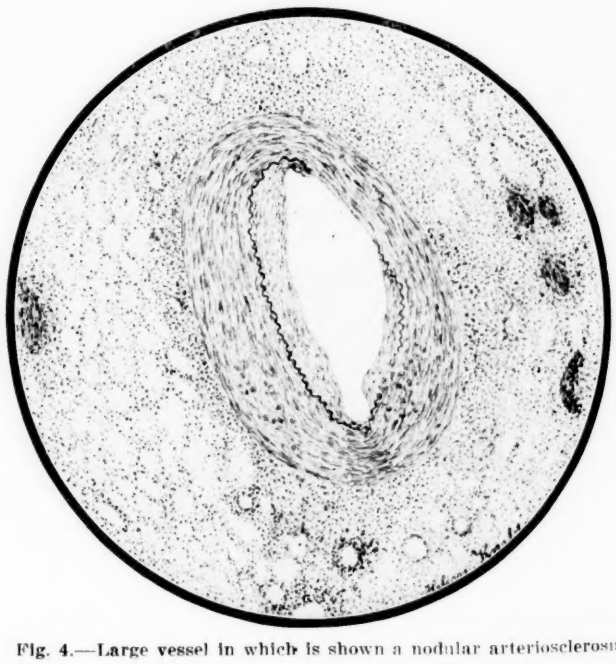


Fig. 4.—Large vessel in which is shown a nodular arteriosclerosis.

Fig. 3.—Showing arrangement of four cords about a large vessel (×8).

About the fourth year of age tenderness was first noted over the right temporo-parietal region and at a point midway between the mastoid prominence and the occipital protuberance. In these respective regions there slowly developed a dense, diffuse enlargement, to which the skin soon became attached. Within the past eight years growths precisely similar in size and location have appeared on the left side of the head.

A few years following the appearance of the growths in the orbits and on the skull, irregular, easily-movable masses developed in the subcutaneous tissue of the right and then of the left cheek. Extension took place over the angle of the right jaw into the parotid region. More or less tenderness has characterized the growths wherever found.

Status Præsens.—Weight 98 pounds, height 5 feet 1 inch. The bones are small; trunk and extremities delicately shaped. Sensorium clear. Deficiency of musculature and adipose tissue. Examination of the nervous system and of the thoracic and abdominal viscera gives negative findings. There is some pallor of the skin. A blood examination gives hemoglobin, 78 per cent.; red cells, 4,470,000; leucocytes, 10,400. The striking thing on inspection is the gigantic head on a dwarfed body. The measurements of the head are: Circumference, 26 inches; anteroposterior diameter, 9½ inches; transverse diameter through temporal region, 8½ inches.

Over each temporo-parietal region and extending slightly on to the forehead are palm-sized enlargements intimately con-

Fig. 6.—Showing fibrous structure of growth and small vessel in which there is extensive subendothelial proliferation.

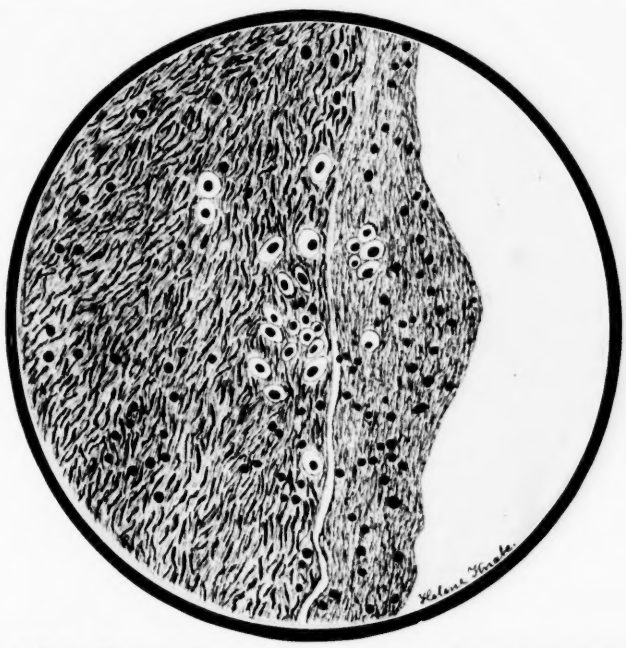


Fig. 5.—Same as Fig. 4, under high power showing degenerative change in intima and media.

Fig. 7.—High power enlargement of vessel shown in Fig. 6. Subendothelial proliferation.

nected with or a part of the bones. Just posterior and superior to the mastoid prominence on the right side is an egg-sized enlargement of similar nature. All these growths on the skull are characterized by tenderness, bonelike hardness and firm attachment of the overlying skin. The skin over these localities, and in fact wherever adherent to the underlying growth, shows brownish, mottled pigmentation. Having the same distribution as the pigmentation are peanut to hazelnut-sized areas of epidermal thickening, resembling sebaceous warts.

The skin of the face hangs in great lobulated folds over the lower jaw and from the orbits on either side (dermatolysis). The lips are enormously thickened. The lower eyelids are everted and coarsely granular. No ocular structure is visible on the right, but on the left at the inner canthus the remnant of an eyeball is seen, which shows a densely sclerotic cornea and is capable of slight movement. Both eyeballs may be palpated as very hard and reduced in size. Firm fibrous adhesions bind the palpebral conjunction to underlying structures, except at the border of the lids. Irregular, hard, wormlike masses, easily palpable, fill the orbital cavities. Similar flattened masses of hard convoluted cords are felt, freely movable in the pendulous folds hanging from either cheek.

Histologic Study.—The patient consented to an exploratory incision for the purpose of removing one of these masses for microscopic study and diagnosis. Through a two-inch incision tortuous white cords from two to six millimeters in diameter were plainly visible. The resemblance to sclerotic vessels was very striking. The strands were of uniform thickness (not beaded) and loosely imbedded in the subcutaneous areolar tissue. An interesting fact is their arrangement in groups of from two to five strands, parallel and surrounding a large artery. (Fig. 2.) On cross section these cords presented a light, translucent, almost transparent appearance.

Microscopic study reveals several features of interest.

1. The predominant histologic structure of these cords (Figs. 9 and 10) is a dense fibrous periphery with a central meshwork of fine fibrillæ, in which there is a sparse distribution of

Fig. 8.—Showing two vessels with extensive subendothelial proliferation; red cells seen in one lumen; smooth muscle cells.

Fig. 10.—Low power showing transverse section of small cord in which is an area of smooth muscle fibers.

Fig. 9.—High power showing fibrillæ in central portion of cords.

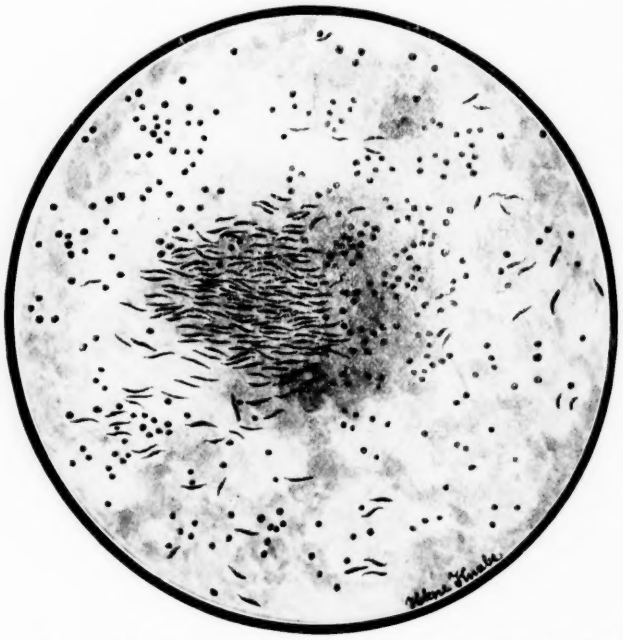


Fig. 11.—High power of Fig. 10 showing the nonstriped muscle cells.

nuclei, round and spindle-shaped. The arrangement suggests a resemblance to perineural connective tissue surrounding a nerve bundle in which there has been proliferation of the endoneurium with degeneration of the nerve fibers. Staining with polychrome methyl-blue fails to give the reaction for mastzellen. Unna considers the presence of the latter cells as highly characteristic of neurofibroma.

2. After staining by the Weigert method, careful search has failed to reveal any nerve fibers.

3. Vascular changes: The large arteries (Fig. 4) show nodular arteriosclerosis with thickening of the intima and some degenerative change in the media. More interesting are the changes in some of the medium-sized smaller vessels. By extensive subendothelial proliferation a wide zone of large cells is formed, surrounded by a rim of fibrous connective tissue, mixed in some instances with smooth muscle fibers. (Figs. 6 and 7.)

Examined in cross-section under a low power, the first impression produced is of a nerve bundle surrounded by its perineurium. But close study reveals a central lumen with endothelial lining in all the various areas of this character, showing the vascular nature. If the contention of Lahmann and others that the so-called neurofibroma may sometimes arise from the connective tissues of blood vessels is correct, may it not be possible that the lesions as described above represent an early period in the evolution of the growth?

4. Another histologic factor of interest revealed in the study of the specimen is the presence of non-striped muscular tissue within the fibrous cords.

DIAGNOSIS.

In its clinical aspects the case described seems to be one of plexiform neurofibroma; that is, a new growth arising from the connective tissue of a nerve trunk. Studied pathologically, this is not proved, although it is possible that such complete degeneration of the nerve fibers may have occurred that histologic origin may be difficult to trace. On the other hand, the contention of Lahmann and others that these growths may arise from vascular structures is supported by the following findings in the case:

(*a*) An absence of nerve fibers and of mast cells.

(*b*) The arrangement of the strands parallel to and surrounding the arteries.

(*c*) Extensive proliferation about the smaller vessels.

(*d*) The presence of smooth muscle tissue in the tortuous cords which constitute the chief gross pathologic feature of the neoplasm.

ETIOLOGY AND PREVENTIVE TREATMENT OF SCARLATINAL NEPHRITIS.*

H. LOWENBURG, A.M., M.D.

Lecturer on Pediatrics in the Medico-Chirurgical College; Pediatrist to St. Joseph's Hospital Dispensary; Assistant Pediatrist to the Medico-Chirurgical Hospital and the Philadelphia General Hospital.

PHILADELPHIA.

In presenting a paper on the etiology and prevention of scarlatinal nephritis, it is not my purpose to attempt any addition to our knowledge, but rather to emphasize the importance of already-known facts. In striving to control any morbid process, that system of therapeutics should be regarded as best which attempts the destruction of etiologic factors or seeks to mitigate their malign influences on the economy. In dealing with the acute infectious diseases the greatest advances have been made along the line of prevention.

This fact has received special emphasis in those diseases in which the habits of the several specific germs and their means of transmission have been carefully studied. This has been notably illustrated in tuberculosis, diphtheria, malaria and, more recently, in yellow fever. Many diseases are rightly regarded as specific even in the absence of evidence sufficient to demonstrate any special organism as the active agent. Among diseases of this character scarlet fever stands pre-eminent. These diseases are best prevented by applying to them the same principles of isolation, disinfection and quarantine which are of value in preventing those maladies which are known to be specific. After the inception of such a disease, in the present state of our knowledge, our province is not to attempt to abort or to cure, but to recognize the possible complications and sequelæ in order that we may either prevent them or mitigate their severity. With respect to scarlatina this is especially true. The disease is self-limited and entirely uninfluenced by drugs. The formerly much-vaunted specifics, sodium benzoate, sodium salicylate, belladonna, etc., have been justly discarded as such. The greatest mortality and morbidity of scarlet fever must be accredited to its complications and sequelæ, which are more far-reaching and produce more human wrecks than those of any of the acute infectious exanthemata.

SCARLATINA AND NEPHRITIS.

Not the least interesting of these complications and sequelæ is nephritis. As humanitarians, as well as physicians, it becomes our function to note carefully the etiologic factors concerned in the production of this serious ailment in an attempt to apply such knowledge to its prevention.

The types of this affection are exceedingly variable. From a careful study of the urine it may be learned that, in the beginning, there occurs a form of albuminuria, sometimes associated with a few hyaline casts and epithelial scales, which is more or less common to the initial febrile stage of nearly all the acute infectious diseases. Then there is noted the acutely septic form of kidney disease which occurs as a complication in the very malignant cases which are rapidly fatal. So rapid is the course that suppression of urine and death from uremia occur here often without edema. This type of nephritis is perhaps best described as a part of a universal sepsis, the toxin of which spends its greatest force on the renal tissue. Occurring in varying degrees of severity we have also that well-known form of renal involvement which makes its appearance during the third and fourth week of the disease or after convalescence has been established. This is the so-called post-scarlatinal nephritis, and occurs with a more or less insidious onset, and unless detected early, may lead to serious chronic kidney disease. There is also met what may be designated recurrent intermittent post-scarlatinal albuminuria. This form has received little if any attention at the hands of medical writers, and yet its existence must have been noted by those who have had a greater clinical experience than I. This form of albuminuria occurs in many of those cases which have suffered from even a mild post-scarlatinal nephritis. It is influenced greatly by exercise and diet. Excesses in both these factors act as excitants of an attack, while a reduction in both is universally preventive and curative. The condition, in my limited experience at least, is compatible with apparently robust health. I have noted it at least two years after an attack of scarlet fever. I have not been able to detect tube casts associated with it.

ETIOLOGIC FACTORS.

Scarlatina is a disease peculiarly suited to the occurrence of nephritis. During an attack of this disease,

* Read before the Northern Medical Association, Oct. 27, 1905.

covering a period of from four to eight weeks, perhaps, there is, during the first half of this time, at least, almost complete destruction of skin function. In this manner the disease is not entirely unlike a severe burn of the first degree both in appearance and in its effect on kidney substance. The kidney, already overworked and overirritated, is thus forced to compensate for this loss of skin function.

Other important etiologic factors may be found in the increased toxicity and the increased acidity of the urine. Of the two the former is by far the more important. Whatever the real poison of scarlet fever may be, without doubt it is removed from the economy via the urine, and, unfortunately, it seems to possess a peculiarly irritant effect on the kidney. This statement receives color from the fact that from apparently the mildest attack of scarlet fever may follow the most serious and persistent attack of nephritis. In fact, J. Lewis Smith records a case in which a mother, previously known to be healthy, while nursing her son who was suffering from scarlet fever, complained of symptoms which led to a urinary examination which revealed albumin and casts. Smith regards this as a case in which the nephritis was the only symptom, and cites it as an example of the severely irritating effect of the scarlatinal poison on the kidney. The patient in this instance made a perfect recovery. The frequency and seriousness of kidney irritation has received emphasis from the work of Sörensen, who has demonstrated postmortem renal lesions in patients who exhibited no clinical features of the disease. This statement seems to prove that the irritant is local and produces the morbid changes early. In order to be local it must be in solution in the urine. J. Lewis Smith also cites[1] the cases of four girls in the same family who suffered from desquamative nephritis, after only one of the four had had scarlet fever.

The increased acidity of the urine can be readily determined by analysis. While not such a potent factor, its influence as a producer of kidney irritation can be readily assumed. It is probably the cause of the early albuminuria and, unless permitted to continue, does not cause serious degenerative changes in the renal tissue. The recognition of this fact has an important bearing on our efforts to prevent this affection. The relationship between the concentration of the urine and its acidity is a positive one, and therefore it, too, becomes an important etiologic factor.

Constipation, by preventing the escape of morbific material via the intestinal tract, thereby permits an increase of the toxins in an already overloaded urine. In this manner it may assume the rôle of an important contributory agent. The same may be said of diet. Dietary indiscretion may be nominated as the most important of any one single causal factor. This is especially true when highly organized proteid substances, such as meats, are too early added. These substances act by increasing the toxicity and the acidity of the urine.

The influence of cold can not be entirely disregarded. Its place, however, as a cause of scarlatinal nephritis has not been fully defined. In discussing this point Tyson remarks that "children have been found barefoot in the street with the eruption on them, and yet have escaped Bright's disease." In detailing the prophylaxis of the latter, the same author, however, proceeds thus: "Whatever may be the immediate cause of the renal involvement, it is certain that cold often becomes its exciting cause." Jacobi affirms that "exposure and sudden changes of temperature will always hold their place in etiology, in the minds of those who do not forget to notice the living case besides the microscopic excrement." My own belief is that it is a factor of much importance in susceptible and anemic cases. The greatest danger lies in a poorly-regulated room temperature, sudden draughts and sudden chilling of the surface by careless bathing. By these means the blood is rapidly driven from the surface capillaries and intense congestion of the internal viscera results.

1. From the *British Medical Journal* Nov. 29, 1879.

PREVENTIVE TREATMENT.

The patient should be placed in a well-ventilated room, the temperature of which should be about 68 to 70 degrees, and should be kept uniformly even. If possible, a room of southern exposure is to be selected. Draughts and sudden changes of temperature are to be avoided.

Diet.—A careful regulation of the diet is essential to the prevention of nephritis. The best diet for scarlet-fever patients is milk. It may be given modified to suit the age if the patient be a healthy bottle-fed baby. If a nursling, maternal milk should constitute the sole source of nutriment. The milk is to be secured with a breast pump. Older children may be given whole milk or milk diluted with a cereal water, lime water or Vichy. If digestion be weak the milk is best exhibited peptonized. However given, milk should be practically the sole article of diet for a period covering from four to six weeks or until desquamation is complete. Experience bears out the observation of Jaccoud that an absolute milk diet is of great service in preventing nephritis. Fruit juices serve a useful purpose by rendering the urine alkaline, and they are very refreshing. Toward the end of the period of desquamation freshly cooked tender vegetables, fruits and farinaceous substances may be cautiously added. Proteids may now be carefully given and only in small quantities. These are gradually increased in quantity and quality as tolerance is established. Throughout the course of scarlet fever, from the beginning, and, especially following each change in diet, the urine should be submitted to a careful daily analysis. On the appearance of the least trace of albumin a return to an absolute milk diet must be made at once.

Hydrotherapy.—Asked to designate any one single remedy which is of the greatest service in preventing scarlatinal nephritis, I should unhesitatingly name water. Its free and continuous use is indicated for the reason that, by increasing the amount of urine, it dilutes toxins and diminishes the acidity, thereby lessening kidney irritation. By stimulating catharsis and diaphoresis the elimination of toxins is facilitated. Water can be employed with advantage in three different ways: by mouth, balneotherapy and by enteroclysis, a combination of all these methods being productive of the best results. It is my practice to order a definite amount of water to be given with as much regularity as the food. It is best given between feedings. If plain water can not be readily taken use may be made of the various mineral waters as Poland or Celistin's Vichy, or, better yet, it may be exhibited as lemonade or orangeade. To a pint of either of the last two may be added, with advantage, a teaspoonful of cream of tartar.

A daily bath, given with friction, is a valuable adjunct. Aside from being the only means to be employed to reduce temperature, it increases the capillary circulation of the skin and thus relieves internal congestion. The bath must be given carefully, otherwise serious chilling of the surface will ensue and the purpose for which it was employed will be defeated. For this reason the full

tub bath is best, the child enveloped in a blanket being completely immersed. A dry blanket is warmed and held ready to receive the patient when the bath is completed. This is followed by free diaphoresis. If the full tub bath can not be used, it may be replaced by sponging, care being taken to sponge only one part of the body at a time, while the rest of the surface is kept covered. The temperature of the water is regulated by the temperature of the patient. It should never be more than five or ten degrees lower. For young children and infants the warm bath is always desirable. Its effect on temperature is often amazing and the diaphoretic effect is always beneficient.

Enteroclysis is a valuable prophylactic agent. From one to eight ounces of normal saline solution should be thrown into the rectum to be retained once or twice a day. It lessens thirst, reduces fever, prevents constipation, lessens toxemia and allays renal irritation.

Medicinal.—The only drugs which are of any value in preventing renal complications are alkalis and laxatives. Urinary antiseptics possess little if any controlling influence. The administration of urotropin is useless and expensive. The salts of the organic acids as the citrate or acetate of potassium are changed to alkaline carbonates in the blood and are eliminated as such in the urine. They thus overcome the acidity of the urine, thereby destroying an etiologic factor of some importance. They are given in the dose of five to ten grains. From the beginning of the attack and throughout the course of the disease minute doses of calomel should be given at intervals of every three or four days. These are best followed by broken doses of magnesium sulphate conveniently dispensed as follows:

R.	Magnesii sulphatis.....gr. v-x		3-6
	Ac. acetici diluti.....m. v		3
	Syr. zingiberis.....m. xx	1	2
	Aquæ dest. q. s. ad.....℥i	30	

M. Sig.: A teaspoonful every two or three hours in water.

Antitoxin.—As noted before, the specific organism of scarlet fever has not been determined. Of all the organisms found the streptococcus seems to be the one most often present. It is nearly always present in the discharge from an otitis media, and has been recovered from the renal tissue. For these reasons it is regarded by some authors as the primal cause of the complications. This view is accepted by Charlton, who, however, regards the presence of the streptococcus as the result of a secondary infection. For this reason he employs Moser's antistreptococcic serum early in the treatment of scarlet fever. Escherich and E. von Leyden comment favorably on the use of this serum for the control of the general symptoms, but assert that it does not influence the occurrence of complications. Moser himself believes that his serum has a beneficient influence on the grave forms of scarlatina, but that it does not prevent nephritis.

Pernicious Anemia.—Menetrier, Aubertin and Bloch report a case of essential pernicious anemia in which by feeding with red marrow and attention to general nutrition the number of red corpuscles increased from 680,000 to 3,000,000 in a short time. They conclude that in every case of grave cryptogenetic anemia, when there is a myeloid reaction, however feeble, it is advisable to try medullary opotherapy. In certain rare cases where the myeloid reaction is marked this treatment by reinforcing and regulating the efforts of the organism itself may cause an increase of the blood globules and at least a temporary cure. Where there is total absence of myeloid reaction this treatment is absolutely without effect.

Special Article

THE PHARMACOPEIA AND THE PHYSICIAN.*

SALINE CATHARTICS.

CHAPTER VIII.

A salt may be defined as a substance resulting from the chemic union of an acid with a base. For the present purpose we shall exclude from this classification salts of alkaloids and of other organic bases, and confine our definition to the popular conception of salts, or purgative salts.

The purgative salts, in contrast to the antiquity of many of the vegetable cathartics, are of but comparatively modern use, many of the inorganic salts being introduced into Europe by the Moors, but not coming into general use until after the time of Paracelsus.

Most of the purgative salts have a disagreeable, bitter taste, but when taken in an effervescing draught this bitterness is masked, and the effervescent salts have therefore come into great popularity. The widespread use of nostrums of this type, instead of the official effervescent salts prepared by the pharmacist, illustrates an unfortunate condition which exists without a sufficient reason. There is too much distrust of the pharmacist by certain physicians, who complain that pharmacists are unable to supply preparations equal to those of the nostrum-maker. This may possibly be true in isolated cases, but the proof to the contrary is furnished by the extreme simplicity of the preparation of the effervescent salts which the average pharmacist can prepare quite as well as the large manufacturer. Nevertheless the proprietaries of this class have an enormous sale.

It is unfortunately true that the physician often lacks confidence in himself and prefers to use the ready-made mixture rather than to exercise his own choice. This is degrading alike to medicine and to pharmacy.

It is a part of our present purpose to illustrate the ease with which the physician may choose his own agents in the proportion which seems best adapted to each individual case, with the assurance that any honest pharmacist can compound his prescription in a form equal in efficiency and elegance to the nostrums.

The preparation of the effervescent salts depends on the fact that tartaric and citric acids and sodium bicarbonate may be kept in contact without change when dry, but unite with effervescence when they are dissolved in water.

As an example of the ease with which effervescent salts are prepared, we give directions for making one, which, though extremely simple, is still the most complex of those which are official. The Effervescent Magnesium Sulphate. The same directions, with slight modifications, are used in preparing the other official granular effervescent salts and may be used when it is desired to include other salts or even caffein and similar substances.

The magnesium sulphate is dried over a water bath, powdered and mixed with powdered citric and tartaric acids, then with the sodium bicarbonate; the mixture is heated to about 95 C. in a dish placed in an oven until it becomes moist; it is then rubbed through an ordinary tinned iron sieve (which forms it into granules). These are then dried at a temperature of 54 C.

Does it seem credible that any pharmacist is unable to make so simple a preparation as that?

Many of the nostrums that are offered to physicians as effervescent saline mixtures are not even granulated, and some of them, at least, depend entirely on the use of the cheaper *tartaric* acid and sodium bicarbonate to produce effervescence. Mixtures of this kind can be prepared extemporaneously quite

* We have received letters calling attention to an apparent discrepancy in the dosage of codein as given in Chapter II of this article, Dec. 23, 1905, p. 1953, and in Chapter III, Jan. 13, 1906, p. 118. In Chapter II, the dose is given as 1/20 of a grain, and in Chapter III it is given as ½ grain. In the first instance referred to it was the intention to give the dose of codein as 3 mg. (1/20 grain), when the drug is used as a sedative in expectorant mixtures. The average dose, of course, is generally double that of morphin, or 30 mg. (½ grain).

as readily as the frequently prescribed liquid preparations, and we shall give several typical prescriptions in connection with the descriptions of the various salts.

Constipation is by far the most common complaint of those who live in cities. While the rational treatment consists in attention to the diet and other hygienic measures, for the most part, it is so much easier to read one of the innumerable advertisements which depict the terrible consequences of constipation, and the one certain means of escape therefrom, that the credulous are inclined to accept such statements as true, and, in a way, lionize themselves because of the dangers they have encountered and escaped.

Any attempt merely to enumerate the financially successful nostrums of this type involves one in immediate difficulties, because of the enormous number of those advertised to the public, while those of this type advertised to physicians are scarcely less numerous.

The principal purgative salts and their indications are so well known that we shall confine ourselves mainly to enumerating some of them, with suggestions for the forms in which they are available, and a few of the combinations which may be found useful. We shall have occasion to contrast the well-known actions of these drugs with the absurd claims made for some of the nostrums which they compose.

MAGNESII SULPHAS.—U. S.—Epsom Salt (by which name it is most widely known) is so called because it was obtained by evaporating the water of Epsom Springs. It is one of the chief constituents in many famous purgative waters, such, for instance, as the Hunyadi of Hungary.

Average dose: 15 gm. (4 drams).

MAGNESII SULPHAS EFFERVESCENS.—U. S.—(Its preparation has been detailed.)

Average dose: 15 gm. (4 drams).

MAGNESII CARBONAS.—U. S.—A bulky, white, odorless and nearly tasteless powder, which is insoluble in ordinary solvents.

Average dose: 3 gm. (45 grains).

MAGNESII OXIDUM.—U. S.—This, commonly called magnesia, or calcined magnesia, closely resembles the carbonate in its several properties.

Average dose: 2 gm. (30 grains).

MAGNESII OXIDUM PONDEROSUM.—U. S.—This differs from the preceding only in being more dense, and therefore requiring a less bulky dose. It was originally known as Husband's magnesia.

Average dose: 2 gm. (30 grains).

LIQUOR MAGNESII CITRATIS.—U. S.—This, almost always called "citrate of magnesia," is one of the most agreeable of the purgative preparations, but it does not keep well, and should therefore be ordered freshly prepared.

Average dose (as purgative): 360 c.c. (one bottle).

Magnesium carbonate is frequently employed as an ant-acid: the oxids, light and heavy, are ant-acid and laxative. The oxids should be given with a large excess of water. They are much used for children.

POTASSII ET SODII TARTRAS.—U. S.—This is commonly called Rochelle salt because it was first manufactured in the city of Rochelle. It was discovered by a pharmacist named Seignette and is often called Seignette salt by the French.

Average dose: 8 gm. (120 grains).

PULVIS EFFERVESCENS COMPOSITUS.—U. S.—Seidlitz powder is the form in which Rochelle salt is most often used.

SODII PHOSPHAS.—U. S.—This has come into very general use of late years in the treatment of chronic constipation, and it is popularly believed to exert a special influence on the liver. It is soluble in about six parts of water.

Average dose: 2 gm. (30 grains).

SODII PHOSPHAS EFFERVESCENS.—U. S.—This is much more pleasant to take than the ordinary sodium phosphate, of which it contains 20 per cent.

Average dose: 8 gm. (120 grains).

SODII PHOSPHAS EXSICCATUS.—U. S.

Average dose: 1 gm. (15 grains).

A preparation so well known as sodium phosphate requires little therapeutic notice, but we wish to offer some suggestions as to the forms in which it is available.

The effervescent salt leaves little to be desired when one wishes to employ it as a laxative, but it is not well adapted to use with hot water.

We give below several examples of its combinations. In some of these lithium citrate is used. Of course, these may be endlessly varied, using the dried magnesium sulphate, for instance, instead of the dried sodium phosphate.

Caffein is often given with effervescing salts, and this or other similar substances may be incorporated without materially changing the formulas.

℞.	Lithii citratis	3i	5|0
	Sodii phosph.	3viii	30|0
	Sodii bicarb.	3x	40|0
	Acidi tartarici	3vi	25|0

The dose of this is about 4 gms. (60 grains).

For use with hot water the following extemporaneously-prepared mixture is preferable to the official effervescent salt:

℞.	Potassii bitart.	3x	40|0
	Sodii bicarb.	3v	20|0
	Sodii phosph. exsic.	3x	40|0

The dose of this preparation is the same as that of the one preceding it. In case a more alkaline mixture is desired the amount of sodium bicarbonate may be slightly increased and the potassium bitartrate correspondingly decreased.

LIQUOR SODII PHOSPHATIS COMPOSITUS.—U. S.—This represents 100 per cent. of sodium phosphate.

Average dose: 8 c.c. (2 fluidrachms).

To make this solution, the Pharmacopeia directs that 100 gms. of sodium phosphate and 4 gms. of sodium nitrate be triturated together in a mortar with 13 gms. of citric acid, until completely liquefied, then sufficient water is to be added to make the product measure 100 c.c.

Although this requ[illegible]s no more skill than the weighing of the salts, the Alta Chemical Company pretends that it thus secures "An Ideal Nerve Tonic, Laxative, Analgesic! Stimulant of Glandular Function, adjuvant to all organic remedies indicated in the organism! relieving Hepatic Congestion, supporting Sexual Power, regulating both excretion and secretion on a normal physiologic basis!"

The indications enumerated are far too absurd to repeat, but as an example of this word waste we quote the following: "Especially reliable as a painless cure for the Morphin Habit!" Does this insolent company suppose that we are bereft of every vestige of intelligence when it insists on telling us such manifest falsehoods as we have quoted, or that Rheumagon, consisting of sodium iodid and sodium phosphate, is "a specific in all cachectic disorders!"

Surely, Baron Munchausen, in his wildest flights of fancy, never imagined anything more preposterously absurd.

When we see how simple is the preparation of the various effervescent salts, and remember that the Pharmacopeia provides reasonably high standards and readily applied tests for the purity of all official salts, with which all reputable manufacturers of chemicals comply, we see how absurd is the pretense of the nostrum makers that they have special processes and peculiar facilities for manufacturing products of superior quality.

LITHII CARBONAS.—U. S.—It is more than sixty years since Lipowitz announced that this salt favored the solution of uric acid. Since then the lithium salts have been widely used, especially in combination with purgatives and diuretics, but there is no evidence that any benefits result from such combinations.

The lithium salts are of comparatively little importance according to the accepted authorities in therapeutics of to-day.

Average dose: 0.5 gm. (8 grains).

LITHIUM CITRATE.—U. S.—Is used for the same purposes and in the same dose as the carbonate.

LITHII CITRAS EFFERVESCENS.—U. S.—Is a convenient form for administering the citrate.

Average dose: 8 gm. (120 grains).

Lithium salicylate was made official in 1880 because of its asserted superiority in the treatment of acute rheumatism: it possesses no advantages over the other salicylates, but the nostrum makers having seized on it while the first reports of its successful use were being circulated, they continue to make the

most extravagant claims for it in their preparations. Cushny specifically denies that the salt has any especial solvent action on uric acid in acute rheumatism; this should be borne in mind when free circular pharmacology is under consideration.

Sal-lithin is typical of a host of nostrums which consist of lithium and purgative salts. It is made by the firm which exploits the thoroughly discredited bioplasm by such absurd misstatements and reprehensible methods. (See THE JOURNAL, vol. xlv, pp. 1587-1812.)

Sal-lithin, according to the advertisement in hand, combines lithium benzoate and citrate, 12.5 per cent., with sodium phosphate and other salts. "Unequalled in Uric Acid Diathesis," "Blood Cleanser," etc. It will be perceived that we have here nothing new, nothing original, and nothing which the practitioner can not obtain from any reputable pharmacist on his own prescription independently of this Bioplasm Company.

In the same circular we find on pages 4 and 5 an invitation in most undignified language to prove the untruthfulness of the assertions made regarding bioplasm; and then in order to save one even that slight trouble (really none at all) the evidence needed is furnished in the following: "Its origin, composition, and formula is published" (the grammar is theirs), "the only reservation being its working or cultivation formula. If this debars it for any one, such are also debarred from using all proprietary remedies, all synthetic products, or even the compounds of the Pharmacopeia, as each manufacturer holds his carefully designed and economic working formulas as a part of his stock in trade and a secret."

This misrepresentation in regard to the Pharmacopeia preparations is wholly gratuitous.

The number of uric acid solvents, each of which is the "most powerful known," is truly surprising. It is still more surprising that mankind continues to suffer from rheumatism and gout, nearly as much as they did before these "discoveries" were made.

Mr. J. LeRoy Webber, Ph.G., is credited by the Bristol-Myers Co. with originating sal hepatica, the really "most powerful" one. It is passing strange that so great a genius should continue to devote his time to supervising its manufacture, since any youth of common intelligence could certainly do it quite as well. This truly wonderful discovery of Mr. J. LeRoy Webber, Ph. G., is also useful, so we are told, in the treatment of "Fullness of Blood," likewise "Acidity of the Stomach," though most of us prefer some acidity of the stomach and not a little blood to fill our arteries.

If further literature of similar nature is desired, we suggest the careful reading of the *Uric Acid Monthly*, particularly with regard to the munificent offer for reports "suitable for publication."

It must be evident to the least observant that we are drifting far from the safe course in therapeutics when men, who have not sufficient knowledge to avoid these absurdities, so glaring that they become apparent on the first appeal to reason, thus exploit our profession and use us to dupe the public. Are we to continue in this degrading position or are we to assert our independence and demand common sense, at least, from those who seek to serve us? The arrogance of the nostrum vendors under the cloak of servility is become insupportable, and physicians should no longer tolerate such abuses.

While we have divided the cathartics (under which term we include laxatives) into two general classes, vegetable and saline, this has been done merely for convenience of grouping, and we shall now take up the more important laxatives and cathartics which have not been discussed.

HYDRARGYRUM CUM CRETA.—U. S.—Gray Powder.—This contains 38 per cent. of mercury (metallic) mechanically mixed with clarified honey and prepared chalk.

Average dose: 0.25 gm. (4 grains).

MASSA HYDRARGYRI.—U. S.—The well-known "blue mass" contains 33 per cent. of mercury (metallic) combined with glycyrrhiza, althea, glycerin, and honey of rose.

Average dose: 0.25 gm. (4 grains).

HYDRARGYRI CHLORIDUM MITE.—U. S.—Calomel is required by the Pharmacopeia to contain at least 99.5 per cent. of pure mercurous chlorid.

There is, perhaps, no drug which is better known than calomel, and we can afford to give it space in inverse proportion to its importance.

Average dose (as a laxative): 0.12 gm. (2 grains).

Despite the widespread use of the mercurials, their mode of action remains a problem. Some authorities assert that calomel must be converted into the oxid, others that small amounts of the bichlorid are formed, and that this is the active agent. The effect on the organism is not less a matter of dispute; pharmacologists usually deny that it causes an increase of bile-flow, as experiments, made by careful observers, on both man and animals with biliary fistulæ have failed to demonstrate any increase. Calomel acts as an antiseptic and the bile is thus protected from decomposition, while the increased peristalsis affords less time for its absorption. Some of the older clinicians, however, still hold to the theory that it really does increase the amount of bile secreted by the liver. However calomel may act, it is the best remedy we possess for that form of indigestion and constipation which is frequently called "biliousness."

Mercury and chalk, commonly called gray powder, does not occasion so much nausea as the other mercurials in common use, and is usually preferred for children who suffer with indigestion and constipation with considerable intestinal putrefaction.

The mercurials are contraindicated in chronic conditions, such as tuberculosis, and in the latter months of pregnancy. The use of calomel as a diuretic has been mentioned, and, while Wood pronounces it useful in chronic parenchymatous nephritis, others maintain that it is injurious, and Sollmann has recently suggested that great conservatism should be exercised in its employment. At any rate it should not be used merely for its purgative effect when nephritis exists, or only with great caution.

SULPHUR PRECIPITATUM.—U. S.—SULPHUR SUBLIMATUM.—U. S.—and SULPHUR LOTUM.—U. S.—are the three forms in which Sulphur is now official. Either the sublimed or the washed may be used as a laxative. The sulphur is slowly converted in the intestine into the sulphid, only to a small extent, which acts as an irritant, while the greater part of the sulphur remains insoluble and acts mechanically—merely by its bulk. Washed sulphur is an ingredient of compound powder of glycyrrhiza.

Average dose (of any of the three forms of sulphur): 4 gm. (60 grains).

(To be continued.)

Clinical Notes

ACUTE ABDOMINAL SYMPTOMS IN TYPHOID FEVER FROM INFLAMED MESENTERIC GLANDS,

SIMULATING INTESTINAL PERFORATION AND OTHER ACUTE ABDOMINAL CONDITIONS.*

TWO ILLUSTRATIVE CASES.

RUSSELL STURGIS ROWLAND, B.S., M.D.
DETROIT, MICH.

Acute abdominal symptoms in typhoid fever have recently attracted considerable interest because of the importance of early diagnosis in intestinal perforation.[1]

The literature is becoming filled with records of cases containing additions to our knowledge of diagnosis and treatment.[2] These studies have shown the varied symptomatology of intestinal perforation and have demonstrated that exploratory laparotomy for diagnostic purposes is more conservative than waiting, in doubtful

* Read before the Michigan First Councilor District Medical Society, Dec. 22, 1905.

1. Scott: University of Penn. Bull., May and June, 1905, p. 981.
2. McCrae and Mitchell: Johns Hopkins Hosp. Report, vol. x, Nos. 6, 7, 8, 9.

cases. As a result, an increasing number of patients have been operated on in whom no perforation was found. Almost every surgeon of experience has had one or more of these cases.[3]

I wish to relate the histories of two typhoid fever patients who had such pronounced abdominal symptoms that in one intestinal perforation was suspected, and in the other a complex of abdominal conditions—appendicitis, tuberculous peritonitis or typhoid fever complicated by one of these conditions. Laparotomy was performed in both instances, and in neither case was there any evidence of peritonitis, intestinal perforation or any of the other abdominal conditions suspected. The symptoms were ascribed to swollen, inflamed mesenteric glands in the region of the cecum.

I am indebted to Dr. John Lovett Morse of Boston for the privilege of reporting these cases:

CASE 1.—Typhoid fever; acute abdominal symptoms, on the thirty-ninth day simulating perforation; exploratory laparotomy; only inflamed mesenteric glands found to account for the condition.

Patient.—W. W., male, aged 26, was admitted to the Boston City Hospital May 20, 1903, on the ninth day of his illness.

Examination.—He gave an ordinary typhoid history and on admission had the usual apathy, flushed cheeks, characteristic tremulous, coated tongue, with red tip and edges, an enlarged palpable spleen and a profuse roseola. The temperature was 103 and the pulse 92. On the day following admission the Widal reaction was positive in a dilution of 1-80 in forty-five minutes, and the leucocyte count was 7,200.

Course of the Disease.—He passed through a moderately severe course of the disease, having a small rectal hemorrhage on May 29, the nineteenth day of the disease. At this time there was no complaint of pain, the abdomen was not distended, he was not restless nor delirious; his pulse was of excellent quality and not changed in rate, and the leucocyte count was 4,600.

On June 2, the twenty-third day, there had been no further rectal hemorrhage; the abdomen was not distended nor tender; the temperature was running with a wide diurnal swing and reaching a lower level.

On June 17, the thirty-eighth day, the note says "uneventful convalescence; patient now up and about the ward for three days." This indicated that the temperature had been normal for about ten days, that the diet had been increased to a simple mixed hospital diet, that the patient was doing light work about the ward and expected to be discharged in a day or two.

On June 18, the thirty-ninth day, early in the morning the man complained for the first time of "cramps in the stomach," which he said began late the day before. The pain was severe enough to keep him from sleeping, though not sufficient to make him complain to the night nurse. At 8 a. m., when seen by the house physician, he had a pale, anxious expression, a pulse in the neighborhood of 120 and a temperature of 100.6. His abdomen was moderately distended and tympanitic, with tenderness and resistance more on the right side. There was no nausea; the bowels moved freely after a soapsud enema; the dejection was semisolid, light brown and without macroscopic blood. The leucocyte count, taken at this time, was 22,100. At 11 a. m. the patient was seen by Dr. Lund in consultation with Dr. Morse. He still had the anxious expression and pallor. The pain had persisted, more severe at one time than another, and indefinitely localized in the right side of the abdomen. There was moderate distension, slight rigidity, muscular spasm and tenderness. No masses were felt and the tenderness could not be definitely localized, although at times it seemed to be more marked in the right lower quadrant. The leucocyte count remained as high as in the morning, 21,400. The temperature had dropped a little, to 99, while the pulse remained in the neighborhood of 120.

A diagnosis of intestinal perforation (?) was made and immediate operation advised. The patient was transferred to the operating room at 3:30 p. m.

Operation.—Dr. Lund made an incision two inches long under cocain anesthesia in the right linea semilunaris, and the abdomen was opened without incident. There was no free fluid. The gall bladder was found in normal condition. At this stage exploration of the abdomen proving painful, on the patient's request, nitrous oxid followed by ether was given. Examination in the right lower quadrant, to which most of the pain was referred after opening the abdomen, revealed a mass of enlarged mesenteric glands, some of them the size of small hen's eggs. Counter abdominal incision was made, over the tumor, to determine if any broken down glands were present. Considerable congestion, but no evidence of breaking down was found. The abdominal wounds were closed in the usual way. There was a good recovery from the anesthetic.

On June 20, the forty-first day, the surgical note states that since the operation the patient has been very uncomfortable, complaining considerably of pain; his abdomen has been markedly distended, in spite of free bowel movements; there has been no vomiting.

By June 22, the forty-third day, the pain and distension had gradually decreased and there had been a steady improvement in the patient's general condition.

On July 6, the fifty-seventh day, "uneventful convalescence; abdominal wounds showing firm cicatrices; general condition good; patient anxious to go home; discharged at his own request to the surgical outpatient department."

Remarks.—In this case the abdominal symptoms developed suddenly, on the thirty-ninth day of the disease, at the end of what appeared to be a normally progressing typhoid convalescence. Pain was the most striking symptom. It developed insidiously, was not extreme, but was lasting and more severe at one time than another. It was indefinitely localized in the right side of the abdomen. Accompanying the pain there was tenderness on deep palpation, slight abdominal distension and spasm of the right rectus muscle. There were no signs of gas or fluid in the peritoneal cavity and no tumor was felt. Hemorrhage was ruled out by the free bowel movement without blood. Besides the local symptoms there was the general picture of collapse—dusky pallor, anxious expression and rapid pulse; and a marked leucocytosis. All the above facts, when considered together, made the diagnosis of intestinal perforation very probable and the exploration of the abdomen in our opinion justifiable.

CASE 2.—Typhoid fever; acute abdominal symptoms on the fifth day. Exploratory incision showed the condition to be due to inflamed mesenteric glands.

Patient.—M. L., female, aged 6, was admitted to the medical side of the Children's Hospital, Boston, on Sept. 7, 1904, on the sixth day of her illness.

History.—The history, given by the mother, was one of sudden onset with pronounced nervous and abdominal symptoms. On the day before admission the patient had complained of "pain in the stomach," and the mother noticed for the first time that her child's right leg was drawn up.

Examination.—The patient was seen in the surgical outpatient department and recommended to the house with the diagnosis, "typhoid fever or appendicitis (?) for observation."

The admission physical note states that the child was poorly developed and nourished; that her cheeks were flushed, and that her face had a pinched, anxious expression. There was photophobia, the pupils were equally dilated and sluggish in their reaction to light; the tongue was swollen and covered with a heavy white fur; the heart was not enlarged, was regular and rapid in action with sounds of good character; there were normal resonance and breathing throughout both lungs. Examination of the abdomen showed slight distension, with moderate tympany and general tenderness, more marked on the right side, where an irregular mass could be felt, below McBurney's point. There was considerable spasm of the muscles in the right lumbar region, the right thigh was drawn to one-third flexion, and the tendon reflexes were increased. Blood examination showed a hemoglobin of 85 per cent. and a leucocyte count of 13,800.

3. Harte and Ashhurst: Annals of Surgery, January, 1904, p. 8.

Course of Disease.—September 8, the seventh day, on the morning following admission, the record states that the patient had been very irritable and restless, crying out in delirium and also sharply when disturbed, but making no complaint at other times, although she appeared to be in pain. She had taken small amounts of nourishment without vomiting; the bowels had moved freely following a soapsuds enema. At the time of the examination she lay with eyes closed and right leg flexed. There was a pained expression and dusky pallor; the pupils were equal and reacted to both light and accommodation; there was rigidity of the neck and extremities, probably voluntary. Examination of the ears was negative. There were a few squeaky râles at the base of both lungs; the heart action was rapid, and the sounds were of good character; the abdomen was flat, lax and slightly more resistant in the right lower quadrant, where a freely movable tumor of the size of a walnut could be felt. The tenderness was more marked in this region, and there was evident pain on pressure over the mass, psoas spasm was considerable, motion at the right hip was limited and apparently painful. Rectal examination revealed a bulging, resistant mass, on the right, similar to that felt by abdominal palpation. The child was delirious and semicomatose so that statements about pain were not reliable. The temperature ranged in the neighborhood of 105; the pulse was over 140. The urine was high colored, acid in reaction and had a specific gravity of 1015; there was a trace of albumin, no sugar and a few renal elements. The leucocyte count continued about the same, 13,400. The Widal reaction was reported negative, as would be expected, on the seventh day of this disease.

Operation.—The patient was seen by Dr. Stone, in consultation with Dr. Morse, and abdominal exploration was advised. The diagnoses made at this time were, in order of preference, appendicitis, tuberculous peritonitis or one of these conditions complicating typhoid fever.

The operation was performed by Dr. Stone. Ether was administered and the abdomen was opened by the "usual appendix incision." The tumor was found to be a mass of enlarged, congested mesenteric glands, several of which were the size of walnuts. There was no evidence of perforation, peritonitis, or breaking down of these glands. The Peyer's patches were injected and thickened, as is usual in typhoid fever. The appendix was slightly congested as a part of the typhoid picture. The abodmen was closed without further operative interference. There was a good recovery from ether.

Postoperative History.—The child was restless and delirious during the night following the operation, but responded fairly well to stimulation. The temperature remained high and the pulse rapid, ranging between 160 and 170.

On September 12, the eleventh day, the patient continued weak and irritable, crying out sharply at times in delirium. She had no nausea and did not vomit, but had to be forced to take her nourishment. She had begun to show emaciation with a sunken appearance about the eyes; the respirations were rapid, out of proportion to the temperature and changes in the chest. The abdomen was very slightly distended and tender in the region of the wound. The leucocyte count was 5,200; the Widal reaction was positive in a dilution of 1-80. The urine was acid, cloudy, yellow and with a specific gravity of 1022. It contained a trace of albumin and a strongly positive diazo reaction; sugar was absent.

The patient passed through a severe course of the disease with profound toxic symptoms and a complicating otitis media.

On October 8, the thirty-fifth day, the clinical note says: "Improvement slow, temperature staying down; patient very weak, unable to sit up but for a few minutes at a time." She showed considerable emaciation and still had a purulent discharge from the right ear. The pulse was of good character and the appetite was improving.

On October 22, the forty-ninth day, the patient had gained sufficiently in strength so that she was "discharged relieved to the Convalescent Home."

Remarks.—The abdominal symptoms in this case occurred early, on the fifth day, in the course of a severe typhoid. At this time there was no roseola; the spleen was not enlarged and could not be felt; the Widal reaction was negative; the heart action was rapid, instead of being relatively slow; there was a moderate leucocytosis; all of which made the diagnosis of typhoid uncertain. The presence of a tumor in the right iliac fossa still further complicated matters so that the real state of affairs never once suggested itself. Appendicitis was the preferred diagnosis of the physician as against tuberculous peritonitis of the surgeon, with in either case possibly a complicating typhoid fever. The diagnosis of tuberculosis peritonitis was influenced by a history of failing health for the past two years.

The striking feature in the case was the tumor. If this mass had not been felt the condition might very well have been taken for perforation and peritonitis, as in the first instance. In regard to the other local symptoms, they were obscured by the intensity of the general nervous condition; however, the impression given was that there was a constant, severe pain, which was paroxysmal in character, localized in the right iliac region, the region of the tumor. How much the local symptoms influenced the general condition could not be determined.

As frequently happens after a diagnosis has been made positive by exploration, the question came to us: "Why did not we think of that before?" Those of us who had seen both cases were immediately struck by their similarity and convinced that the symptoms were due to the inflamed, mesenteric glands. We had the feeling that we might have diagnosticated the second case correctly and would certainly try to differentiate the condition in the future.

That acute abdominal symptoms simulating intestinal perforation and peritonitis could occur during the course of typhoid fever from swollen, inflamed mesenteric glands, has been thought probable for some time; definite statements in the literature on this point, however, are very few. Berg[4] says that it is not uncommon for patients to develop all the clinical manifestations of a localized peritonitis at sometime in this disease. It is his belief that in some instances these symptoms may arise from stretching of the peritoneum by swelling of the mesenteric glands. Armstrong[5] reports opening the abdomen in two cases without finding a suspected perforation. In one patient no cause was found; in the other he considered the symptoms to be due to swollen mesenteric glands. In discussing Armstrong's paper, Billings[6] remarked that pain and other symptoms simulating perforation might be due to inflammation and infection of the glands of the mesentery. McCrae,[7] in his analysis of abdominal pain in 500 cases of typhoid fever, states that in 70 cases in the series there was no known cause for the pain. Fourteen of the patients besides pain had local abdominal symptoms simulating perforation. Two of these patients died, both apparently of intense toxemia, and at autopsy no cause could be found for the acute abdominal symptoms, unless they were due to enlarged mesenteric glands. Abdominal pain has been described as occurring with suppurating mesenteric glands of typhoid fever, but whether the ordinary enlarged glands can give rise to pain, he says, is a question. Finally, Wilson[8] mentions having seen several cases of sudden intense pain on the right side of the abdomen in the iliac region with rigidity of the muscles and but very little constitutional disturbance. In a few hours these symptoms passed away and the patient was left apparently as well as previously. He was at a loss to account for the condition, which is certainly suggestive in this connection.

4. Berg: Medical Record, March, 1901, p. 441.
5. Armstrong: Annals of Surgery, November, 1902, p. 739.
6. Billings: Annals of Surgery, November, 1902, p. 622.
7. McCrae: New York Med. Jour., May 4, 1904.
8. Wilson: THE JOURNAL A. M. A., April, 1905, p. 1026.

There was no doubt as to the cause of the acute abdominal symptoms in our cases. In the first patient, previous to opening the abdomen, the symptoms were more on the right side; and on exploration, the pain was definitely referred to the enlarged glands in the ileocecal region. In the second case, although there was profound depression of the nervous system, it was evident that the local abdominal symptoms were associated with the large mass of glands in the ileocecal region.

LeConté[9] has recently reported a case of ruptured suppurating mesenteric glands occurring during typhoid fefever with symptoms simulating intestinal perforation. He reviews the other reported cases and discusses the anatomy and pathology of these glands in typhoid fever. His studies show that it is the ileocecal group of glands, as in the present cases, in which there is the greatest change and enlargement. He finds that the breaking down of these glands is a rare condition; there were but six reported cases at the time his paper was written (1904). Enlargement of the glands, sufficient to produce subjective and objective symptoms, is probably much more frequent. The enlargement itself is an almost constant lesion in typhoid fever. In over one-third of the exploratory laparotomies for suspected perforation, no cause was found to account for the symptoms. With the exception of the instances already mentioned, no statement was made in regard to the condition of the glands of the mesentery; consequently, nothing definite can be said as to the frequency of acute abdominal symptoms from this cause.

Without going into a detailed account of symptoms, a few points can be emphasized which might differentiate intestinal perforation. Of first importance, it seems to me, is the presence of a tumor in the right lower quadrant. There may be fullness and tenderness in intestinal perforation on rectal examination, but a freely movable, tender mass in this region ought to suggest something more. In our second patient such a mass was easily felt. It led us to consider appendicitis and tuberculous peritonitis. In the first case there was no record of a tumor, but from the size of the mass of glands and the state of the abdomen, we were almost certain they could have been palpated. Examination should be made both by abdominal and rectal palpation in every case of this sort. Symptoms due to gas and fluid in the peritoneal cavity, obliteration of liver flatness and flatness in the flanks occur late or not at all in most cases of perforation. Of earlier occurrence in some instances is the arresting of peristalsis and spasm of anterior abdominal muscles producing a splinting effect resulting in the pushing up of the lower border of the liver. As would be expected in the two cases in question, none of the above signs was present. There was but slight distension, no change in the area of liver flatness, no flatness in the flanks and peristaltic movements persisted. General constitutional symptoms are very variable in cases of perforation, but usually there are signs of shock followed by the collapse of general peritonitis. In our two cases the symptoms were more those of severe toxemia.

It is of interest to note in this connection that symptoms due to swollen mesenteric glands may occur early or late in the course of typhoid fever, in the first instance on the thirty-ninth day, and in the second on the fifth day of the disease.

Elsberg,[10] in discussing the indication for operation in intestinal perforation, has made the statement that when the symptoms have been at least of twelve hours' duration and the signs and symptoms point more to perforation than anything else, especially if the patient's general condition is growing worse, operation is justifiable. In both cases the pain and local symptoms had persisted for more than the above time limit, the general condition had grown progressively worse, and from our physical examination we were not satisfied with the state of the abdomen. While believing that needless exploration should be avoided, as far as possible, we felt justified in our advice in these cases. If in the course of typhoid fever there are acute abdominal symptoms especially localized in the right lower quadrant, and a freely movable tumor can be felt there, it would seem safe to adopt an expectant plan of treatment. On the other hand, if there is any doubt, as there usually will be, immediate exploration should be advised, as the danger of operation is slight, bearing out Munroe's[11] statement: "Exploration where there is no peritoneal infection or serious organic lesion is practically harmless."

CONCLUSIONS.

The following conclusions may be drawn:

1. In some of these cases in which exploration showed no cause for the symptoms, these were probably due to changes in the mesenteric glands.

2. Some of the recoveries which have been reported from intestinal perforation without operation probably occurred in cases of this sort in which the symptoms simulated perforation.

3. McCrae's suggestion that pain and acute abdominal symptoms might be due to enlarged mesenteric glands is credible, and further observation and study will probably show that this condition is not, relatively speaking, a rare complication in typhoid fever.

9. LeConté: THE JOURNAL A. M. A., October, 1904, p. 1188.
10. Elsberg: Medical Record, July, 1904, p. 47.

FIBROMA OF THE NASOPHARYNX.

TRACHEOTOMY, EXTERNAL CAROTID LIGATION, EXTIRPATION, CURE.

CHEVALIER JACKSON, M.D.
PITTSBURG, PA.

History.—S. D., male, aged 14, gave a history of an increasing nasal stenosis of a few years' duration. Several pieces of a "polyp" had been removed by physicians at different times, followed in each instance by severe hemorrhage, but with no relief to the breathing, which grew worse until scarcely enough air to sustain life could be inspired, even with the mouth widely open. His parents feared he would choke to death at night, and he was awakened by a choking sensation every time he fell asleep. Death from inanition threatened because of increasing dysphagia. Bleeding had been frequent, and a week before admission a severe hemorrhage from the nose and throat almost exsanguinated the boy. Headache and earache were frequent and severe.

Examination.—The boy was frail, emaciated, pale and anemic. Leucocytes were increased; hemoglobin was decreased. Nasal respiration was impossible; his mouth was never closed except to swallow, which was difficult. The right nasal chamber was occupied by a hard tumor, which pushed the septum over tightly against the outer wall of the other nasal fossa, thus completely occluding both. The right upper maxilla was bulged outward as if by an antral tumor. The velum was pressed forward on to the tongue, with which it was in contact at all times, except when lifted by a semi-voluntary effort at each inspiration. Back of the tightly stretched velum a smooth, hard, glistening, reddish, vessel-streaked tumor filled the nasopharynx so completely that the finger could not palpate any but the visible portions of the growth. Diplopia and exophthalmos showed the bulging upward of the orbital plate.

11. Munro: Boston Med. and Surg. Jour., February, 1903, p. 146.

Operation.—A clinical diagnosis of fibroma was made, my opinion being that it was bi-lobed and that it had its origin on the right side of the vault close to the right choana, all of which proved to be correct. General anesthesia in such a case is practically impossible. Respiratory arrest is synchronous with unconsciousness. Dr. John W. Boyce very kindly infiltrated an area over the trachea, which enabled me to open the trachea in a few minutes absolutely without pain. This was remarkable in a frail boy, who was watching our every movement. Chloroform was now skillfully administered through the tracheal wound by Dr. W. H. Strang. The right external carotid artery was ligated between the lingual and the superior thyroid arteries to forestall hemorrhage. A small probe, in whose point a small eye had been drilled, was threaded with braided silk and passed backward through the right nasal chamber. It was insinuated between the growth and the tightly stretched velum, through which it could be felt as it worked backward. When the eye point of the probe reached the free margin of the velum, the silk was caught with forceps and drawn out the mouth for a convenient length and the probe was withdrawn from the nose. The bight of a length of snare wire was tied to the nasal end of the silk, by means of which the wire loop was drawn back through the nose until it reached the pharynx. The loop was then insinuated around the presenting portions of the growth and worked upward by traction on the ends projecting from the nose. When the loop was felt to be taut around the base of the growth, these projecting wire ends were threaded through the straight canula of a Peters tonsil snare by my assistant, Dr. Ellen J. Patterson. Closing the snare handles, the growth was cut through at one stroke. The severed tumor was then delivered with strong forceps, without lacerating the palate, though this seemed imminent, owing to the tight fit of the growth.

The bleeding was about as much as from an adenoidectomy; nothing like the welling up after the extirpation of a fibroma. Anterior and posterior plugs were placed and the tracheal canula which had been inserted to facilitate anesthesia was removed as soon as the boy came out sufficiently. The plugs were allowed to remain forty-eight hours. No bleeding followed their removal.

The temperature rose to 101 F., but returned in two days to normal. The carotid wound healed promptly. The boy was out of bed on the third day, and was discharged well at the end of the week. No sign of pulsation was yet perceptible at the temporal artery two weeks later.

The right upper maxilla had undergone a pressure atrophy which had almost obliterated the antrum. There was no cartilage in the septum, probably also the result of the same process, and the nasopharyngeal cavity was enormous. The growth, which weighed 1,270 grains, was found by Dr. Ralph Duffey to be a pure fibroma.

When one looks over the appalling list of deaths on the table from hemorrhage in the removal of fibromata and over the list of preliminary operations, temporary and permanent jaw resections, etc., the contrast here recorded seems to furnish food for thought. I have ligated the external carotid artery thirty-four times without in any case an untoward result. Eight of these ligations have been preliminary to the extirpation of nasopharyngeal fibromata, and in no instance has the bleeding been serious. The greatness of the contrast can be realized only by one who has seen the blood well up out of the mouth like water out of a drinking fountain. External carotid ligation is a guarantee against hemorrhage, shock and collapse. Not only does it prevent loss of blood, but by diverting a greater quantity of blood into the internal carotid it increases intracerebral blood pressure. Whether this agrees with the physiologists' dynamics of blood pressure or not I do not know, but clinically I have seen throbbing headache and also insomnia of a few days' duration follow external carotid ligation, and I have seen no shock in eight cases of extirpation of nasopharyngeal fibromata, cases similar to ones in which death occurred from hemorrhage and collapse. In my opinion, these observations point to increased intracerebral blood pressure after the ligation. The influence of local anemia in the prevention of recurrence is, of course, an additional advantage, especially in cases of double ligation, or, better still, exsection.

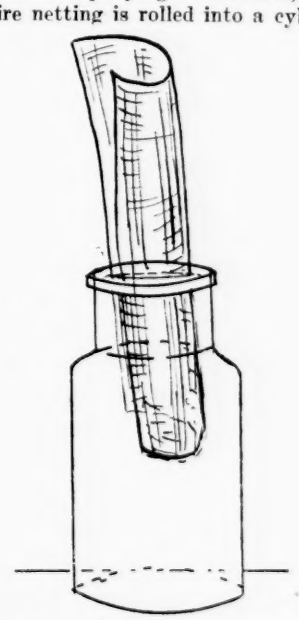
I do not consider an operation for true fibroma of the nasopharynx justifiable without preliminary ligation of one or both external carotid arteries. If the side from which the growth springs can not be determined, ligation of both external carotids is indicated, preferably with an interval of three or four days, during which the tracheal wound may be kept from healing by packing with gauze wrung out of mercuric bichlorid solution, no tube being worn and no air being permitted to pass through the wound. From this there is no danger of pneumonia. Nor do I consider it justifiable to administer a general anesthetic until after the trachea has been opened, if the growth be large enough to press the velum forward on to the tongue. I do not say that neglect of these precautions means death, but I claim that the mortality of these operations can be thus reduced practically to naught. Hemorrhage, dyspnea and chloroform act synergistically in the induction of collapse. Let us forestall hemorrhage by external carotid ligation and dyspnea by tracheotomy (under local anesthesia) so that we may give our chloroform in comparative safety.

METHOD OF WASHING SMALL PIECES OF TISSUE.

GUTHRIE McCONNELL, M.D.
ST. LOUIS.

I have devised a method of washing small bits of tissue which have been hardened in Zenker's or similar fluids, and which does away with the difficulties usually encountered in that proceeding.

As shown in the accompanying illustration, a piece of fine-meshed copper wire netting is rolled into a cylinder and stuck



well down into a bottle. The bits of tissue are put in this and the water is turned on; all danger of losing the specimen is obviated as the water can not rise to any degree above the mouth of the bottle.

Until I happened to think of this method I had to devise rather elaborate or cumbersome ways of accomplishing the desired end.

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SATURDAY, FEBRUARY 17, 1906.

THE NATURE OF ENZYMES.

Since up to the present time no ferments have been isolated in an absolutely pure condition we are entirely unfamiliar with their chemical characters, and consequently are obliged to recognize them solely by their action. So far as we know, true enzymes never occur except as the result of cell life—they are produced within the cell and increased in amount by each new cell that is formed, and, furthermore, they are probably present in every living cell without exception. As the same facts are equally true of the proteids, and apparently true of nothing else, it is natural to associate the enzymes with proteids and so to explain the importance of the proteids for cell life. If enzymes are obtained in any of the usual ways from animal cells or secretions they are always found to give the reactions for proteids, even if repurified many times; but it is well known that by any method of precipitating proteids the other substances in the solution tend to be dragged down by the colloids, and it is possible that the enzymes are merely associated with the proteids in this way. Furthermore, enzymes are known to become so closely attached to stringy proteid masses, such as fibrin and silk, that they can not be removed by washing. Some observers have claimed that they have secured active preparations of pepsin and invertase that did not give proteid reactions and contained very little ash or carbohydrate, but it has so far been impossible to secure trypsin free from proteid, and diastase seems to be an albumose-like substance. Analyses of enzymes purified as completely as possible do not have great worth, for these substances are probably far from pure; however, it is of some importance that they vary greatly in the proportions of carbon, hydrogen and nitrogen which they contain, indicating that possibly different enzymes may be of very different nature. Active gum enzymes, with oxidizing properties, are said to have been prepared free from nitrogen.[1]

Macallum has shown microchemically that phosphorus is closely associated with the formation of zymogen granules in cells, which seem to be started in the nucleus, and there are many other observations suggesting that certain ferments are closely related to the nucleoproteids. This is particularly true of the oxidases, which seem also to contain iron and manganese. A final point of importance in support of the proteid nature of enzymes is that pepsin destroys trypsin and diastase, while trypsin destroys pepsin.

So uncertain, however, is our information concerning the chemical nature of the enzymes that it has become possible for a hypothesis to be developed urging that enzymes are immaterial, that the actions we consider as characterizing enzymes are the result of physical forces which may reside in many substances, and perhaps even free from visible matter. Arthus, who has been the chief champion of this very interesting conception, compares enzyme action to such forces as magnetism. A magnetic iron bar loses its characteristic property when sufficiently heated just as an enzyme does. Dissolve either the magnet or the enzyme in strong hydrochloric acid and it loses its power to affect other substances. It has been equally impossible to isolate enzymes and magnetism, both of which are recognized by their actions and not by themselves. Just as light, heat and electricity were once considered as matter, so has it also been with enzymes, and Arthus believes that they will eventually be stricken from the list of material things and considered as forms or a form of energy. There can be no question that this conception rests on strong grounds, and it possesses the stimulating qualities that make an hypothesis helpful, but, as Oppenheimer says, all chemical substances may be considered in the same way. We recognize all bodies through some form of energy; if we speak of sulphuric acid it is really of the properties of energy it shows, such as its taste, which is the energy imparted by its ions to the nervous system, or its combining with bases, etc., which also is a manifestation of energy. In the same way we recognize the ferments, and we may properly believe that they are fully as definite substances as is sulphuric acid. The magnet comparison also fails when we remember that the magnetism can be introduced into a bar of iron and removed at will, but as yet it has not been possible to introduce enzymatic properties into an inert proteid or to restore them to an enzyme that has been destroyed by heat.

Other valuable evidence of the material existence of enzymes is their specific nature, lipase affecting only fats, and trypsin only proteids, indicating chemical individuality. They are true secretions, formed within the cell by recognizable steps, and, furthermore, when injected into the body of an animal they give rise to the formation of specific immune bodies that antagonize their action. Emil Fischer's work with the sugar-splitting enzymes, moreover, indicates that they owe their action to their stereochemical configuration. He prepared two sets of sugar derivatives which differed from each other solely in the arrangement of their atoms in space (i. e., isomers) and found that one specific enzyme would split members of only one of the sets, while another would act only on the variety with the

1. A recent paper by Tschirsch and Stevens casts considerable doubt on this statement. Pharmac. Centrhalle., 1905, vol. lvl, p. 501.

opposite isomeric form. These experiments make it very probable that there must be a certain relation of geometrical structure between an enzyme and the substances it acts on, and leaves little room for question of its material nature.

Bredig has found that colloidal solutions of metals have many of the properties of true enzymes, accomplishing many of the decompositions produced by enzymes, being affected by temperature of nearly the same degree, and even being "poisoned" by substances that destroy or check enzymes. The only possible explanation of these phenomena seems to be that the effects are brought about by surface phenomena. A colloidal solution of platinum, so far as is known, differs from a piece of metallic platinum solely in the enormously great amount of surface it offers in proportion to its weight, and it is well known that surface may affect chemical action. Hence we have the possibility that some enzyme actions at least may depend on the existence of a very large surface, and since by no means all colloids are enzymes, that this surface must bear a certain relation in form to the surface of the body that is to be acted on.

COPPER SULPHATE INSUFFICIENT FOR WATER PURIFICATION.

We have referred several times to the claim made in some quarters in behalf of copper sulphate as a means of ridding water, not only of obnoxious algæ and infusoria, but of pathogenic bacteria as well. In so doing, we expressed hesitation about accepting, on the evidence then available, the doctrine that the addition of a few pounds of copper sulphate to a large body of polluted water was sufficient to free the water from dangerous germs. It now appears that this conservative attitude was fully warranted. A series of important investigations carried out on this subject under the auspices of the progressive State Board of Health of Massachusetts have just been published,[1] and serve to shed a good deal of light on points heretofore obscure. It is shown that not only is the use of copper sulphate in water filtration not an aid to purification, but that, on the contrary, when the salt is applied directly to the water on the surface of a filter, it reduces the efficiency of the filter very materially, and eventually would seriously impair the essential biologic action of the filter. In accordance with the thorough-going methods of the Massachusetts Experiment Station, this statement is based on experiments lasting for a full year.

A prolonged experimental investigation on the bactericidal action of copper is also reported in the same connection. The important conclusions here reached as the results of extended experiments are notably different from those based solely on a small number of tests made with limited quantities of water in a laboratory. The writers (Clark and Gage) "believe that the treatment of water with copper sulphate or by storing in copper vessels has little practical value." Their principal reason for this conclusion is that although the removal of *B. coli* and *B. typhosus* is occasionally accomplished by dilute solutions of copper sulphate, these organisms may both live for many weeks in water containing copper sulphate in greater dilutions than 1 to 100,000; and in order to be safe, dilutions of 1 to 1,000 must be used, in which case the water becomes repugnant to the user because of its strongly astringent taste. As regards the standing of water in copper vessels, the time necessary to effect complete sterilization is so long that a receptacle of almost any other material would seem to be as effective as copper. Metallic copper seems to have little more "germicidal power" than iron, tin, zinc or aluminum. The writers add: "In some instances very dilute solutions of copper sulphate or colloidal copper absorbed from contact with clean metallic copper, appear to have a decidedly invigorating effect on bacterial activity, causing rapid multiplication, when the reverse would have been true had the water been allowed to stand the same length of time without any treatment."

Whatever proves to be the merits of the application of copper sulphate to the water of reservoirs infested with malodorous algæ—and there is reason to think that success will attend the method in this field—there is no good ground for the assumption that sewage-polluted water can be made pure by the addition of this chemical.

1. Supplement No. 2, 1906, Journal of Infectious Diseases, p. 172-209.

THE CENTENNIAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

In the two last numbers of THE JOURNAL may be found some account of the proceedings of the Medical Society of the State of New York during the recent meeting in Albany. The occasion is of such importance, however, especially certain features of this annual session, that it is a matter of marked interest to the entire profession. The arrangements to celebrate appropriately the one hundredth anniversary of the foundation of the society had been perfected and were carried out in the most fitting and interesting manner. The address of the president, Dr. Joseph D. Bryant, treated in felicitous manner the history of the society, the disruption of twenty years ago, and the recent cordial union of the two state organizations into one great society. One of the principal addresses of the occasion was by ex-President Cleveland, who is also a former citizen and ex-governor of the State of New York. Appropriate addresses were also made by Dr. William H. Welch of Baltimore and Dr. William W. Keen of Philadelphia. Elaborate addresses on medicine, surgery and sanitary science were prepared, respectively, by Dr. Samuel B. Ward of Albany, Dr. Roswell Park of Buffalo and Dr. Herman

M. Biggs of New York. It was regretted by all that Dr. Roswell Park, on account of illness, could not be present. His address was read by Dr. Hopkins of Buffalo. The extent and excellence of the scientific program was not impaired by the centennial proceedings, the papers and discussions being of the usual high standard of the society.

The feature of the meeting, most interesting to physicians generally, was the cordial greeting and fellowship of those who so long had been separated by rival state organizations. The full attendance on the scientific sessions, the brilliant annual dinner, which filled the large hall to overflowing, attested the completeness of the reunion.

Immediately following the address of the president of the society, the President of the American Medical Association, Dr. L. S. McMurtry of Louisville, made a brief address, expressing the gratification of the entire profession at the unification of the profession in the Empire State, and cordially welcomed the society on its resuming its place as the constituent branch of the national Association in New York. The proceedings throughout were marked by the most cordial spirit of co-operation, which assures for the reorganized society a new era of professional and scientific advancement.

The universal satisfaction and pleasure arising from the success of this memorable meeting were marred by the sudden illness, terminating fatally a few days later, of Dr. George Ryerson Fowler of Brooklyn. One of the foremost of American surgeons, and a man of attractive personality, he had devoted himself zealously to the harmonious union of the two societies. As a member of the conference committee of the society he contributed largely to the result attained. As chairman of the centennial committee he labored early and late to promote the success of that celebration. His severe illness came on suddenly at Albany on the very eve of the meeting, and elicited throughout the anxious sympathy of his colleagues.

OPPOSITION TO ORGANIZATION: WHY?

Until a few years ago the medical men of this country have practically gone each his own way; medical societies or associations have been few and far between and of small membership. Now that physicians are coming together and are striving for the common good, and a spirit of association and comradeship and betterment is abroad in the land, we begin to see what the barren years have produced. We find that unscrupulous manufacturers have amassed fortune after fortune by exploiting nostrums through the medium of our divided profession. We find nostrums by the score lauded to the skies in medical journals owned or controlled by the nostrum manufacturers. We find thousands of physicians depending on the one-sided and often untrue statements furnished them by the interested manufacturers—practically getting their "education" in therapeutics from the trade "literature" of the proprietary medicine manufacturer. The nostrum evil and many others have come on us because of our ignorance, our lack of association in work.

There are always scavengers and carrion birds, and naturally there are commercial interests that are working against harmony and unity in the medical profession, for they see that harmony means association in work; association in work means enlightenment and knowledge, and, together, these mean an end to their dishonest and ill-gotten gains; for they grow rich on professional ignorance and the blind credulity which results. The manufacturers of worthless nostrums do not wish to see "Unity, Peace and Concord" in the medical profession. They are opposed to the rapid spread of organization—to the association in work which follows activity and harmony in county medical societies. Also, and naturally, many of the "medical" journals of the country, which can live only on the advertisements of worthless nostrums, do not contemplate this spirit of organization with any degree of pleasure. Some are openly and crudely attacking and opposing either local or state organization, or the efforts of the American Medical Association to encourage it. Others, more subtle, more wily, and hence more dangerous, are appealing to the "independence" of the individual physician; are flattering his own "individual judgment," and telling him he is too wise to allow himself to be "herded" into an organization that is "controlled by machine politicians." This sort of thing is to be expected, and unless we know the actual reasons, the real dishonest motives for such biased or untrue statements, we can not understand them. Association, work, study, enlightenment, will rapidly disclose the predatory hand of the nostrum maker, and we will realize why he is opposed to any and all organization that will bring physicians together for their own betterment and his loss through the disclosure of his lies.

These are things that each one of us should carefully consider: If we give no thought to ourselves, to whom shall we turn? If "independence" brings with it ignorance, strife and poverty, where is the advantage over association in work with the betterment, mental and financial, that results from harmony and study and that friendly feeling toward one's fellows which we find in the healthy, active county medical society? What can anyone of us "sacrifice" by associating with his fellow-physicians in a county medical society? Is there any loss of dignity or of independence in trying to become better informed, better educated, more up to date?

TWO DEFINITIONS OF MEDICAL PRACTICE.

Two judges in New York have recently given definitions of the practice of medicine. One alleged definition was by Justice Joseph M. Deuel, of the Court of Special Sessions, whose character was recently exposed by the evidence brought out in his unsuccessful suit for libel

against the editor of *Collier's Weekly*. The decision, to which we referred last week, was in the case of an osteopath who had been prosecuted by the County Medical Society and fined for practicing without a license. Judge Deuel decided, on appeal, that the practice of medicine consists of three things: Diagnosis, the discovery of the cause of disease, and its cure by drugs. According to this decision, if a physician does not prescribe drugs he is not practicing medicine. He added that the statutes aim to suppress the ignorant and indiscriminate administration of drugs, and that this is practically the whole intent of legislative medical regulation. Needless to say, if this were true, then most of the quacks and charlatans might continue their imposition on the public without let or hindrance. They might do everything, apparently, even surgery, without fear of disturbance, provided only they did not prescribe medicine, yet this is the narrow view still held by some judges.

Fortunately for New York and the work of the County Medical Society in the suppression of quackery, the other definition of the practice of medicine recently made is eminently satisfactory. Judge Greene, of the city court, said that he had looked over the legal authorities of the state without being able to find a definition of what constitutes the practice of medicine. The case before him was one that absolutely demanded such a definition for its decision. Judge Greene defined the practice of medicine as "the exercise or performance of any act by or through the use of any thing or matter or by things done, given or applied, whether with or without the use of drugs or medicine and whether with or without fee therefor, by a person holding himself or herself out as able to cure disease, with a view to relieve, heal or cure, and having for its object the prevention, healing, remedying, cure or alleviation of disease."

This definition ought to be of great value to the New York County Medical Society in its future prosecutions of illegal practitioners. It leaves very few loopholes, if any, through which they can escape. It would still be desirable to obtain an indorsement of this definition in a decision of the highest courts, but the fact that it has been given out judicially is, in any case, a useful step in advance. We believe that a rational interpretation of medical practice acts would warrant a similar definition in every state where such acts exist. As a lay journal very well says, "the person who undertakes to do the work of the doctor, which is the curing of diseases, does not evade responsibility by any trick of method. Whether there be administration of drugs, the laying on of hands, resort to bread pills, baths, dieting, blue glass, incantations or hypnotism, the operation is the practice of medicine, in the spirit of the statute. This statute is for the protection of the public health, as well as to guard the credulous invalid from the rapacity of swindlers. Judge Greene's view will be accepted as the popular view, not only because it upholds a benign law, but because it is the expression of plain common sense."

THE ADVANTAGES OF NATIONAL QUARANTINE.

Dr. Sexton's article in this issue of THE JOURNAL points out some of the advantages of a national quarantine over the present unsatisfactory systems adopted by the several states. The experience of last year was, in fact, an efficient object-lesson. It was not until the United States authorities took a hand that the epidemic was stayed and a miniature war between the states averted. His article, however, gives in useful detail some of the advantages as they appear to one who is on the ground and can speak from experience. As he says, the protection from disease is as important as the protection from a foreign foe, and we certainly would not leave the latter, with its expenses and perils, to be exclusively a function of local border authorities. There is much in the argument that the whole country should share the cost of the defense, although it may be certain sections are not directly threatened. The lack of uniformity of local quarantines is also a self-evident drawback to their efficiency, all the more so when, as was the case last summer, obsolete and inefficient measures are depended on in some quarters as against the more efficient ones in others. The general respect which is shown to national authority without regard to state boundaries is also a very important additional factor of efficiency. The unnecessary interruptions of commerce between the states due to whims of local health authorities is another self-evident evil which, touching, as it does, the pocket nerve, should be a strong argument in favor of national control where perhaps others might fail. Local political influences, moreover, can, as he says, be put out of the question as factors of inefficiency, a reform which Dr. Sexton deems imperatively needed. Under the Public Health and Marine-Hospital Service or under control of Army and Navy medical officers, such conditions need not exist. Whether all the states will willingly surrender their independent control of local quarantine matters may be questioned, but there is no doubt that it would be to their best interests to do so.

THE HOT SPRINGS DECISION.

Some little time ago an Arkansas judge issued an injunction against any interference with a Hot Springs touting doctor, holding that the State law prohibiting such practices was unconstitutional and that the cession of the jurisdiction of the Hot Springs reservation to the General Government was also void. The case was promptly carried to the Arkansas Supreme Court, which has just rendered its decision. It says, as regards the jurisdiction of the United States and the right of Congress to enact laws regulating the use of the Hot Springs by physicians, that it raises a question in which it would follow the decisions of the Federal courts and which it does not feel bound to consider at the present time. If the United States jurisdiction did not exist, however, there would still be a valid state law against the practices of drumming or touting for patients, and the fact that the individual in question is being prosecuted in the Federal courts instead of in State courts would not justify the issuance of the injunction. The main question with the supreme court was whether or

not the state law is valid, and it decides that it is. The judgment was reversed, with an order to dismiss the complaint for want of equity. Our reputable confrères in Hot Springs are to be congratulated and commended for their energetic conduct in this matter. The drumming system at Hot Springs had become almost a prescriptive right and the reputation of the well-known watering place had suffered accordingly. The worthy practitioners there and the public generally have long felt the reproach, but could do little to remove it. It seems to us that the supreme court's decision, in the form in which it is given, fairly settles the question and should be effective in eradicating disreputable practices and practitioners from that popular health resort.

THE COST OF ANTIVACCINATION.

At the present time there seems to be a sort of recrudescence of agitation against vaccination all over the country, but more pronounced in certain sections. This has been especially the case in Pennsylvania, where smallpox has prevailed to some extent and where, in consequence, the vaccination and isolation laws have been more strictly enforced than in ordinary times. In view of the attempts to influence public opinion and to bring about legislation for the repeal of compulsory vaccination laws, the commissioner of public health, Samuel G. Dixon, makes public some statistics and estimates of the state health authorities. From a careful estimate it appears that, outside of the cities and boroughs, the average cost of quarantining smallpox cases is, at the lowest figures, $350 for each individual patient. Special figures are given for special localities which, in a general way, bear out these statements. In the cities or boroughs the figures are also formidable, in spite of the better facilities for isolating and quarantining these cases. For example, in a recent small epidemic at Williamsport, the public expense for caring for 18 cases was $5,132, or $284 apiece, while the cost of public vaccinations was only 29 cents apiece. These figures could probably be paralleled in many other states and communities where smallpox has prevailed, and ought to be of some influence with the taxpayers and legislatures. If a fraction of the cost of smallpox could only be assessed on those who are responsible for it, viz., the antivaccinationists, there would very soon be an end to their arguments and agitation. It is a disgrace to civilization that in any modern community of presumably civilized people such a wholly preventable disease as smallpox should exist, and a still greater discredit to their intelligence that they should oppose the one undeniably efficient preventive of its occurrence.

CHILD LABOR REFORM.

Although the evil of child labor in factories or shops is apparently on the increase in certain sections, especially in the South, much encouraging progress is reported. Action on the subject was taken in twelve out of thirty-nine state legislatures last year, and existing laws are being enforced in a number of sections of the country. The temptations to neglect their enforcement are great, the plea of poverty being often effective. The ultimate fact, however, remains in all cases that to make good citizens we must begin in childhood, and that any interference with the child's physique or moral welfare is a wrong that can not always be repaired—certainly not under the continuance of conditions which exist in factories, coal mines, etc., where children of comparatively tender age are too often largely employed. The medical profession should guide public opinion and take an active interest in all movements for a rational enforcement of child labor laws and their extension to states where they do not now exist. Under present conditions child labor is demoralizing morally, as well as crippling mentally and physically. If a child can not always secure its right to be well born (and that is a matter in which as physicians we are professionally interested) we are still more responsible in securing for it reasonable chances during the critical periods of growth. In some of its phases the labor question is a serious matter as far as childhood is concerned.

AN EXPERIMENT IN SEASICKNESS.

Seasickness is not generally considered a serious disorder, and its victims do not get the sympathy they deserve, considering the amount of human happiness that is even temporarily destroyed. Occasionally, however, it is a very serious matter to individuals and its public importance may perhaps be estimated from the fact that to it has been attributed the influencing of the fate of nations by the limitations of their sea power which it caused. It is not altogether surprising, therefore, that there exists in France and possibly elsewhere in Continental Europe, a "League Against Seasickness." This body, it is reported, proposes to charter a steamer and invite some six hundred physicians to sail from Hamburg, Antwerp and French ports to Lisbon at the time of the International Medical Congress. It is expected that experimental study of the subject will be conducted, and that in this way practical tests of the various methods of treating the condition can be carried out. The projectors should consult naval architects in their selection of the vessel or in the provisions for its outfitting and ballasting. If they secure a sufficiently lively craft, and the Bay of Biscay and other seas are propitious or unpropitious according to the point of view, some valuable subjective and objective testimony may be educed.

MORE ON PURE-FOOD LEGISLATION.

According to the Chicago *Tribune*, it is probable that the Lorimer pure-food bill is to be, or is being, pressed before the Senate this week by its advocates. The same paper says, also, that this bill was partly drawn up by E. N. Eaton, analyst of the pure-food commission of Illinois, who is opposing the Heyburn bill for fear that it would take the inspection and analysis of food products from the hands of state analysts and thus diminish their official functions and importance. If this is the case we do not envy them their responsibility should the Heyburn bill fail to pass. The Lorimer bill is not what

is wanted, and the most obvious cause of its introduction is the desire to defeat the Heyburn measure, which has the indorsement of all the best authorities and of all true well wishers for reform in the matter of food and drug adulteration. The need of a general law is made clear by such facts as are given in the Chicago *Tribune* February 13 concerning the efficiency of the Illinois pure-food commission. According to that paper, it is the practice of the Illinois commission to remit all fines for violations of the state pure-food law, and the manufacturers have come to regard the commission as a thing to be played with, a mere political machine. While similar bodies in some other states are relatively efficient, these facts, if true, in Illinois are sufficient to destroy any dependence on state laws alone. The Lorimer bill, the National Manufacturers' bill and all other similar devices that have been or may be introduced are simply attempts to kill off the measure that is really demanded by all the best interests of the public. As Senator McCumber said in the Senate, their purpose was well stated in the *National Druggist* when the Manufacturers' Association was organized. The heading of its article was "How to Kill Pure-Food Legislation." It is bad enough for the Heyburn bill to find enemies among those who should be its friends, but, after all, opposition from state officials who, by their own inefficiency, furnish an object-lesson for the need of General Government regulation, ought not to be very effective.

LODGE PRACTICE EVIL: A SOLUTION?

The evils of lodge and contract practice are becoming more and more apparent. Medical societies have taken action in various ways, but none thus far taken tends to settle the question without strife. There seems to be at least one way in which this question may be settled, if an agreement to the plan can be brought about. Let the lodges continue to provide medical and surgical attendance for their members, and, if they so desire, let them have their official physicians. Instead, however, of paying the lodge physician a lump sum on the basis of so much per member, which results usually in absurdly small per capita payment, let him be paid the regularly accepted fees for such work as is actually rendered. In case a member desires attendance at the hands of some physician other than the one employed by the lodge, he could, under this plan, call in his own physician, and yet place his lodge at no more expense than though he had been compelled to call in the official lodge physician. We recently called attention to the conflict between the Shasta County (California) Medical Society and a local lodge of "Eagles." There have been some publications in the local press subsequently, and in one of these, emanating from the "Eagles," the statement is made that there have been very few cases of sickness for the lodge physician to attend, and that he has received about $3.00 for each actual visit, whereas the regular fee for that community is but $2.50 a visit. If this is the case, the plan here proposed would have resulted in an actual saving to the lodge, while at the same time it would have prevented the existence of strained relations between some of the population of that county and most of its physicians. Would it not be well for medical societies carefully to consider this idea and the advisability of trying to get the lodges in their various vicinities to adopt it? The co-operative principle, on which lodge and contract practice are based, is growing rather than contracting, and doubtless it will always exist even in its application to medical treatment. It would seem wise, therefore, to endeavor to devise some plan by which its existence will not be a menace to the self-respect of physicians and an influence tending to the reduction of fees—all too small even now.

Medical News

CALIFORNIA.

Scarlet Fever Epidemic.—An epidemic of scarlet fever is reported to be raging in Martinez; 33 cases have been reported, with one death.

Fire in College.—The four-story frame building occupied by the College of Physicians and Surgeons, San Francisco, was damaged by fire January 18, to the extent of $40,000.

Society Meeting.—Santa Barbara County Medical Society, at its January meeting, elected the following officers: President, Dr. William B. Cunnane; vice-president, Dr. David A. Conrad; secretary, Dr. William T. Barry, and treasurer, Dr. Charles S. Stoddard, all of Santa Barbara.

Prohibits Distribution of Medicine Samples.—The Selma health board is reported to have recommended the passage of an amendment to the present health ordinance making it illegal to give away or to distribute samples of these remedies. The step is said to be taken not so much in the interest of the adult population, but as a matter of protection for children who are liable to be seriously injured by picking up such packages and eating the contents.

Personal.—Dr. Beatrice M. Hinkle has resigned as assistant city physician of San Francisco and has removed to New York City.——Dr. Elliott H. Woolsey, Oakland, has gone to Honolulu for a two months' trip.——Dr. Simon Baruch, New York City, has taken charge of the new Paso Robles bath house.——Dr. Charles W. Bryson has been elected dean, and Dr. I. C. Fisher, vice-dean, of the faculty of the Los Angeles College of Physicians and Surgeons. Dr. Walter S. Johnson has been elected trustee of the college and editorial manager of the *Los Angeles Medical Journal*, vice Dr. Nichols, resigned.

COLORADO.

Officers Re-elected.—At the annual dinner and meeting of the board and faculty of the Denver and Gross Medical College, January 26, Dr. Sherman G. Bonney was re-elected dean of the college and Dr. Robert Levy, secretary.

Pure Water and Power.—Boulder, determined to secure pure water, has purchased several lakes near the crest of the Rocky Mountains which are fed by melted snow. A pipe line will convey the water to Boulder, and the fall will furnish sufficient power for electric light for the city.

Rival Coroners.—Dr. R. H. Paxton, who was deposed as coroner by the board of commissioners of Fremont County a few monts ago because of alleged non-residence, has brought ouster proceedings in the county court against Dr. William C. Stevenson, who had been appointed to fill the vacancy. Since Dr. Paxton's removal both physicians have been performing the duties of coroner.

Personal.—Dr. Ella Head has been appointed physician of Greeley.——Dr. Richard W. Corwin, Pueblo, has been elected president of the conference of state charities and corrections, and Dr. Hubert Work, Pueblo, vice-president.

DISTRICT OF COLUMBIA.

Personal.—Dr. Robert F. Tobin has been appointed a member of the medical staff of the Washington Asylum, vice Dr. De Haven Sharp, deceased.

Agree on National Quarantine Bill.—The members of the special committee, selected at a caucus of southern senators and representatives, have agreed on a national quarantine bill limiting quarantine measures to yellow fever and appropriating $600,000 for the work.

Ophthalmologists Regret Burnett's Death.—The Society of Ophthalmologists and Otologists of Washington, at its regular meeting, held January 19, adopted a preamble and resolutions of sorrow at the death of Dr. Swan M. Burnett, its first president, and of sympathy to his widow and son.

ILLINOIS.

Chicago.

Personal.—Dr. John C. Corbus, Mendota, has been re-elected superintendent of the Illinois Eastern Hospital for the Insane, Hospital.——Dr. Gerhard T. Nelson, Morris, while on his way home from a train early January 29, fell and fractured his leg.

Oak Park Hospital Plans.—On February 11 announcement was made that the plans for the Oak Park Hospital have been completed. The site selected is at the corner of Wisconsin Avenue and Monroe Street, with a frontage of 367 feet on Wisconsin and 171 feet on Monroe Street. The building will accommodate 65 patients.

Joint Meeting.—On January 31 the Winnebago County Medical Society and the Central Wisconsin Medical Society held a joint meeting in Rockford, at which the principal subject discussed was the treatment of tuberculosis. In the afternoon the visiting physicians were tendered a banquet at which Dr. Ernest C. Helm, Beloit, presided as toastmaster.

Personal.—Dr. John W. Marchildon has returned after two years of study abroad.——Dr. Anthony K. Warner has returned after a ten days' trip to Cuba.——Dr. David J. Doherty, who leaves for the Philippines Islands February 22, is to continue his scientific studies and travel in the islands, and will probably remain away more than a year.——Dr. Albert C. Hammett was seriously injured in a runaway accident, February 1.

Civil-Service Examination.—Examinations for assistant physician in the insane hospitals will be held by the Illinois civil-service commission, February 27, at Cook County Hospital, at the railroad and warehouse commission's rooms, the capitol building at Springfield, and at the city council chamber, East St. Louis. The particulars of the examination were noted in THE JOURNAL of January 27. Applications will be received up to February 23 and should be made to Joseph C. Mason, secretary and chief examiner, Chicago.

Hospitals De Luxe.—James Henry Smith has given $500,000 to St. Luke's Hospital to be used in the construction of an annex to the institution for pay patients, to be erected on the Michigan Avenue property of the institution. The present hospital building will thereafter, it is said, be devoted entirely to free patients.——The board of managers of the Presbyterian Hospital has already obtained pledges of $352,000 toward the $400,000 required for an addition to the institution which, it is claimed, will be the finest and most luxurious hospital in the West.

The Dinner to Baron Takaki.—On the evening of February 10, Dr. Nicholas Senn and the Senn Club gave a dinner in honor of Baron K. Takaki, surgeon general, Imperial Japanese Navy. Dr. Fernand Henrotin presided and introduced Dr. Senn, who delivered an eloquent address of welcome to the distinguished guest. Baron Takaki, after a brief response, delivered an address on naval sanitation which dealt chiefly with his researches on beriberi whereby the disease has been practically exterminated from the Japanese navy. When Baron Takaki entered the navy in 1872 three-fourths of the entire sick list was made up of beriberi patients. In the endeavor to overcome this condition Dr. Takaki made a study of the ration of the navy and discovered that it contained too great a proportion of carbohydrates and too little albuminates, and furthermore that the prevalence of beriberi varied directly with the variation of these food constituents. As the result of his investigations, he endeavored to change the constituents of the ration by the issue of barley in place of a part of the rice ration. After many years of strenuous work required by the as strenuous opposition of officers and men of the navy, Takaki gained his point, and with the change in the ration beriberi practically disappeared. Baron Takaki also declared that beriberi can be artificially produced and that it can be positively prevented by diet. In closing his address he gave statistics of the total dead and wounded in the Russo-Japanese war up to Dec. 5, 1905. The total number of dead and wounded was 3,689, 1,892 of whom died instantly and 117 subsequently, leaving a balance of 1,680 wounded. The percentage of death rate was 54, and more than 90 per cent. of the wounded returned to duty.

IOWA.

Variolinum.—The State Board of Health at its last meeting discussed the subject of internal vaccination by means of variolinum. The homeopathic members of the board favored the idea, while the regular and eclectic physicians opposed it. A resolution was passed to ask the present legislature to define vaccination or to legalize the present definition of the State Board of Health.

New Medical Practice Rule.—In accordance with a request from the medical faculty, the board of regents of the State University at its last meeting adopted rules regarding admission to the medical college in conformity with a recent action of the State Board of Medical Examiners providing that no physician will be allowed to take the examination for license to practice in Iowa unless he is a graduate of a school that has a four years' course and that does not give credit for any work done outside of the medical college.

Bills in the Legislature.—The following bills have been introduced in the legislature: A bill for the registration of graduate nurses, and a bill asking for an increased appropriation for the State Board of Health Bacteriologic Laboratory at Iowa City. This laboratory was created by the legislature two years ago and began work in September, 1904. During this time, according to the last report of the director of the laboratory, more than 6,000 examinations have been made. The laboratory is proving very popular with the physicians of the state, and has been instrumental, through early diagnosis, in preventing a number of very probable epidemics of diphtheria and typhoid fever. The entire appropriation asked for will no doubt be granted.

MARYLAND.

Baltimore.

Personal.—Dr. Edward Lindon Mellus is in Cairo, Egypt.——Dr. Campbell P. Howard sailed for England, February 3.

Health Report.—Influenza is reported to be very prevalent in Baltimore.——During the week ended February 10 there were 39 deaths from consumption and 36 from pneumonia.

Senior Student Killed.—J. Howard Hughes, a senior medical student at the University of Maryland, was killed by the accidental discharge of his pistol at Jersey City, N. J., February 4.

MASSACHUSETTS.

Damaged by Fire.—The residence of Dr. Robert Burns, West Newton, was damaged by fire February 8 to the extent of $12,000.

Anti-Expectoration Law.—Among the bills introduced in the legislature is one providing for a fine of from $1 to $10 for every person who expectorates in any public place except in receptacles provided for the purpose. This bill is strongly favored by the Society for the Prevention of Tuberculosis.

Alumni Meet.—The Boston City Hospital Alumni Association held its annual meeting February 8. Dr. Charles W. Williams is succeeded as president of the association by Dr. George A. Leland. Dr. George T. Tuttle was elected vice-president; Dr. William H. Robey, Jr., secretary; Dr. William H. Prescott, treasurer, and Dr. George L. West, member of executive committee.

Hospital Reports.—The number of accident cases treated at the Massachusetts General Hospital in 1905 was 5,459, or 700 more than in 1904. The total of outpatients, however, decreased about 4,000. This is explained by the policy of the hospital of referring back cases to family physicians or institutions where they have been previously regularly treated. The McLean Hospital and the Convalescent Home in Waverly are under the same board of trustees. There was a total deficit for the three institutions for 1905 of $23,000 as compared with $21,000 in 1904. It is expected that the new building for women at Waverly, made possible by the bequest of Edward W. Codman and to be called the Codman House, will be ready for occupancy in 1906.

Warren Long in Service.—Of the resignation of Dr. John Collins Warren the trustees of the Massachusetts General Hospital say:

> In January, 1905, the term of Dr. John Collins Warren came to an end, and for the first time in our history the annual report appears without the well-known name of Warren on its pages. It was voted in accepting the resignation of Dr. Warren that the following minute be placed on our records:
>
> "John C. Warren and James Jackson inspired the efforts that led a general public to establish this hospital in 1814. Dr. Warren remained in the service of the hospital until the year 1853. J. Mason Warren became a member of the surgical staff in 1846 and died in the service of the hospital in 1867. John Collins Warren's name first appeared on the rolls of the hospital in 1865, and with

his resignation there closes for the present this illustrious succession through our whole history, of three men, father, son and grandson, who each in turn have been conspicuous for able, conscientious and devoted service to this great charity. A service which deserves and receives the grateful notice of the trustees, and the thanks of the unnumbered patients who have profited by their skill and devotion."

MINNESOTA.

Ramsey County Election.—Ramsey County Medical Society had its annual meeting January 9, at which Dr. Burnside Foster was elected president; Dr. Paul Cook, vice-president; Dr. Frederick Leavitt, secretary-treasurer, and Dr. Alvah F. Whitman, necrologist.

Two Rooms Endowed.—In consideration of the gift of $35,000 made by David C. and Frank P. Shepard, to pay off mortgages against St. Luke Hospital, St. Paul, the trustees have invested the donors with an endowment title to two rooms to be designated and known as the "Frances Aurelia Shepard Endowment."

Old Vienna Students Meet.—On February 3 physicians of Minneapolis and St. Paul, who have studied in Vienna, held their first annual banquet. Dr. Jehiel W. Chamberlain, St. Paul, was elected president; Dr. Louis A. Nippert, Minneapolis, vice-president, and Dr. Emil S. Geist, Minneapolis, secretary and treasurer.

Offended at Governor's Action.—It is reported that a majority of the State Board of Medical Examiners is preparing to oppose the action of Governor Johnson in reducing the homeopathic representation on the board from three to two. The governor recently appointed Dr. Oswald Leicht, Winona, a regular, to suceed Dr. William A. Beach, Mankato, a homeopathic practitioner. The governor states that his failure to name a homeopath was an oversight, but that his action is irrevocable.

MISSOURI.

To Stop Improper Advertising.—At the February 10 meeting of the St. Louis Medical Society announcement was made that legislation had been discovered whereby the indecent advertisements of medical firms in the lay press could be suppressed, and the firms successfully prosecuted and driven out of business.

Reform in Control of Municipal Institutions.—At the meeting of the St. Louis Medical Society, February 3, the joint medical council, which consists of delegates from the various medical organizations of the city, presented a plan looking to reform in the system of control and management of the city's hospitals and dispensaries. At the present time the hospitals are under direct control of the health department, the health commissioner having power to appoint all the employés, medical or otherwise, of the various hospitals under the care of the city. There is no provision for a medical staff, either visiting or consulting, the entire medical as well as the executive charge of the hospitals being placed in the hands of a medical superintendent appointed by the mayor. To replace this antiquated system the council has suggested a plan, the principal features of which are as follows: 1, The absolute separation of the health department from the hospital department; 2, the vesting of hospital control in a board of trustees to be elected by the people; 3, the appointment by this board of an executive head for each institution, and 4, the appointment of a medical staff. The plan as presented was endorsed *in toto* by the society and will be brought up for consideration before the other societies represented in the council. It would appear that the profession is a unit in demanding these reforms, which will, however, require amendment of the city charter before they can be made effective.

NEBRASKA.

Training School Opened.—The training school of the City Hospital, Ord, was opened January 1, under the charge of Dr. Chester A. Brink.

Refused License.—The State Board of Health, after a lengthy hearing, adopted the following resolution regarding the application of Dr. Alfred Welsh of Haigler for a license to practice medicine:

Resolved, That a license to Dr. Welsh to practice medicine be denied at this time, and that the matter be referred back to the board of secretaries, and leave granted to amend his application, to be hereafter considered.

Injunction Made Perpetual.—In the suit of Dr. Baker, Madison, against Dr. John R. Montgomery of the same place, in which an injunction was asked on the ground that the defendant had sold his practice to the plaintiff and had agreed not to practice in that field, the district judge decided that a physician who sells his practice to another may not resume practice in the same field as a competitor of the man to whom he sold, provided that such an understanding existed between them. The judge granted the injunction applied for and made it perpetual.

General Hospital Opened.—The Omaha General Hospital was formally dedicated and opened January 28. The institution will accommodate 100 patients and has in addition accommodations for friends of patients who may wish to remain. The following have been appointed a staff for the ensuing year: Surgeons, Drs. Walter O. Henry and Edwin C. Henry; attending physicians, Drs. Andrew B. Somers, H. Leroy Crummer and John H. Vance; consulting physician, Dr. Benjamin F. Crummer; gynecologists, Drs. Alvo S. Pinto and Frederick J. Wearne; obstetrician, Dr. Alonzo E. Mack; consulting obstetrician, Dr. Joseph C. Moore; oculist and aurist, Dr. Henry L. Burrell; neurologist, Dr. Samuel K. Spalding; dermatologists, Drs. H. Clayton Sumney and John W. Hellwig, and gastrologist, Dr. H. L. Akin.

NEW YORK.

To Prevent Marriage of Insane.—A bill has been introduced into the legislature forbidding the marriage of insane, epileptic, imbecile and feeble-minded persons. The bill provides that if thirty days before a marrige of persons known to have been in such a state, they shall file a physician's certificate of cure, the marriage shall not be considered illegal. Another measure makes it a felony for any person of sound mind to intermarry or live with such a person or aid in such a marriage. The punishment is ten years' imprisonment or $1,000 fine, or both.

Violations of Pure-Food Law.—Papers have been served on two prominent grocers of Schenectady in civil actions instituted by the so-called pure-food law. Eight more actions against other grocers will be instituted within a few days. The penalty is $100 for each offense. The action was brought by a special attorney assigned to the state department of agriculture. Last spring the state commissioner of agriculture sent inspectors all over the state to secure samples of foodstuffs for analysis. The results of these analyses were appalling. Eight hundred cases of violation of the pure-food law were sent to the attorney general, who sent them to the special attorneys appointed to the several counties. Owing to the deplorable conditions found, it is understood that sweeping amendments to the pure-food laws are to be submitted by the department of agriculture to the legislature for immediate adoption. Under existing laws it is impossible to reach the real offenders, many of whom are outside the state.

New York City.

New Health Department Building.—Health Commissioner Darlington formally opened the new laboratory building of the department February 9.

Microscopes for Columbia.—An equipment of microscopes for the department of physiology has been presented to this institution by Dr. David L. Haight, a graduate of the medical school in 1864.

Reception to Baron Takaki.—After the regular meeting of the New York Academy of Medicine on February 15 a reception to the baron was held, at which he made some remarks on medical schools in Japan.

Harvey Society Lecture.—The ninth lecture in the Harvey Society course will be delivered by Prof. T. H. Morgan, February 17, on "The Extent and Limitations of the Power to Regenerate in Man and Other Vertebrates."

Dinner for Hospital.—The committee which was appointed at the dinner for the Manhattan Eye and Ear Hospital last year to furnish a dinner in 1906 has arranged to give this dinner at the University Club, February 20.

Low Death Rate.—The death rate for the week ended February 3 was the lowest on record for the corresponding week in any year since the records have been kept, being equivalent to an annual rate of 18.1 per 1,000. Last year the rate for the corresponding week was 19.53.

Remodeled Willard Parker Hospital Opened.—This hospital was reopened to the inspection of physicians and the public February 9. Among the many new features of the building are the sun parlors on every floor and the thoroughly equipped wards for treating contagious diseases.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended February 3, 1,489 cases of measles, with 52 deaths; 378 cases of diphtheria, with 39 deaths; 343 cases of tuberculosis, with 178 deaths; 208 cases of scarlet

fever, with 7 deaths; 41 cases of typhoid fever, with 3 deaths; 28 cases of cerebrospinal meningitis, with 17 deaths, and 180 cases of varicella, a total of 2,667 cases, with 296 deaths.

The Skene Monument.—The monument of the late Dr. Alexander J. C. Skene, which is now being erected at the western end of the Prospect Park Plaza, will be completed within six weeks. The monument will consist of a bust on a twelve-foot marble shaft, raised against a marble background, which is to bear an inscription telling of Dr. Skene's achievements. The cost of the work is to be $5,000. This memorial will stand in the most conspicuous position that could have been assigned it in the neighborhood of the park.

Society of Sanitary and Moral Prophylaxis.—At a meeting of this society held at the Academy of Medicine, February 8, the question whether instruction in the nature and dangers of venereal diseases should be given to the men of the Army and Navy service was discussed by Col. Valery Havard, United States Army, and Medical Director George E. H. Harmon of the United States Navy. The question whether the co-operation of the national government should be enlisted on this work was discussed by Dr. Louis L. Seaman.

PENNSYLVANIA.

Personal.—Dr. Thomas Redding, Hatboro, was severely injured by being thrown from his carriage when it was struck by a trolley car, February 3.

More Births Than Deaths.—According to the report of the secretary of the Board of Health, Jenkintown, with its 2,500 inhabitants, had only 25 deaths in the year 1905, or one in every 100 population. There were 15 marriages and 42 births.

Free Antitoxin.—In the few months that the system of free distribution of the diphtheritic antitoxin throughout the state has been in force, the state's death rate from that disease has been reduced almost 80 per cent. This remarkable reduction in the death rate means that instead of claiming 420 lives out of every 1,000 children or adults afflicted with the disease, diphtheria now gets only 88 victims out of 1,000.

Philadelphia.

Bequest.—The will of the late Adam W. Louth devises $5,000 to St. Agnes' Hospital for the endowment of a free bed to be known as the "Mary Louth free bed."

Will Keep Cars Clean.—The co-operation of the Rapid Transit Company in the crusade for clean and wholesome cars has been promised by the officials of the company. It is stated that they will clean the cars daily and also disinfect them with carbolic acid spray or carbolic acid scrubbing each day.

Society Election.—At the general meeting of the Medical Society of the Woman's Hospital the following officers were elected to serve the current year: President, Dr. Frances C. Van Gasken; vice-president, Dr. Clara T. Dercum; treasurer, Dr. Miram M. Butt, and secretary, Dr. Ellen C. Potter.

Dr. Marshall Resigns.—Dr. Clara Marshall, who for many years held the chair of materia medica and therapeutics in the Women's Medical College, has tendered her resignation, to take effect at the close of the present session, June 1. She will, however, retain her connection with the college as its dean.

Voodoo Doctor to Hang.—The governor has fixed March 26 as the date for the execution of George P. Hoosey, a "voodoo" doctor from whom Mrs. Catherine Danz is alleged to have received a powder which is said to have caused the death of her husband. Mrs. Danz was convicted of murdering her husband and was sentenced to be hanged. The board of pardons, however, recommended that the sentence be commuted to life imprisonment.

Hospital Reports.—During January 63 patients were under treatment in the Kensington Hospital for Women.——The Germantown Hospital admitted 132 and discharged 92 patients. Seventeen hundred cases were treated in the different dispensaries.——The Samaritan Hospital admitted 115 patients to the wards and discharged 104. Four hundred and thirty-four new patients were admitted to the dispensaries and 2,048 total visits were made to the different dispensaries.

Personal.—Dr. Roland G. Curtin presided at the third annual banquet of the Center County Association at the Hotel Majestic, February 7.——Dr. John H. Musser represented the University of Pennsylvania at the annual reunion of the New England Society of the alumni of the university, held in Boston, February 6.——Dr. William H. Teller will entertain the Association of ex-Residents and Resident Physicians of the Jewish Hospital at his home on February 20.

Health Report.—The total number of deaths reported for the week numbered 584. This is an increase of 13 over those reported last week and a decrease of 28 from the number reported in the corresponding week of last year. The principal causes of death were: Typhoid fever, 29; measles, 20; scarlet fever, 4; whooping cough, 8; diphtheria, 11; meningitis, 3; consumption, 52; cancer, 27; apoplexy, 23; Bright's disease, 33; suicide, 4; accidents, 19; heart disease, 49; acute respiratory disease, 120; enteritis, 29, and marasmus, 2. There were 530 cases of contagious disease reported, with 44 deaths, as compared with 507 cases and 34 deaths in the preceding week. There were 361 cases of typhoid fever, with 29 deaths, or 14 more cases and 8 more deaths than for the previous week.

VIRGINIA.

Personal.—Dr. H. Ward Randolph of Richmond has sailed from New York for Europe, where he will take postgraduate work.

Smallpox Outbreak.—Smallpox has broken out, chiefly among the negroes at Port Walthall, Chesterfield County. The public schools have been closed till all the children have been properly vaccinated. No deaths have been reported so far.

Physician's Tax Abolished.—The city license tax on physicians has been abolished by Richmond. The tax was an arbitrary measure varying from $10 to $100 per year, based on the supposed prosperity of the physician. The yearly income to the city was about $4,300.

Physician Assaulted.—Dr. J. L. White, one of the leading physicians of Farmville, was murderously assaulted on the night of February 5 when returning from a call. His skull was fractured and his condition is very serious. His assailant has not yet been captured.

GENERAL.

Vaccination for the Filipinos.—The Philippine Commission has appropriated $100,000 for the purpose of conducting vaccinations throughout the islands.

Cholera in the Philippines.—Dr. Heiser, chief quarantine officer for Manila, reports that cholera is now gradually disappearing from the province of Cavite, and apparently is establishing itself in the province of Bulacan. The bureau of health is following the disease from center to center and promptly stamping it out wherever it makes its appearance. These efforts so far have been successful, in that the disease has practically remained stationary.

Annual Report of Queen's Hospital, Honolulu.—The annual report of J. F. Eckardt, superintendent of the Queen's Hospital, contains the following: The number of patients in the hospital January 1 was 47; admitted during the year, 606; total number of patients treated,, 653, as against 654 in 1904, 783 in 1903, 752 in 1902 and 817 in 1900. The number of deaths, 42 in a total of 653 patients, gives a percentage of 6.41 per cent., as against 7.8 per cent. in 1904, 6.14 per cent. in 1903, 6.12 per cent. in 1902 and 8.44 per cent. in 1901. Of the patients, 171 were natives of Hawaii; 146 of the United States; Porto Rico, 60; Germany, 43; Portugal, 40; Japan, 24; China, 22; Korea, 21; Norway, 18; England, 16; Sweden, 12; Ireland, 8; Scotland, 7; France, 7; Australia, 5; Russia, 5; Argentine, 4; Belgium, 4; Denmark, 4; Italy, 4; Spain, 4; West Indie, 4; Austria, 2; Canada, 2; Holland, 2; Philippine Islands, 2; India, Guam, Peru, Panama, British Guiana, Martinique, St. Helena and Nova Scotia, each 1. Sixty-two patients were refused admission. Of these 24 were suffering from pulmonary tuberculosis and 9 from other incurable diseases; while 29 were not proper hospital cases; 52 patients, after receiving treatment, left the hospital, and 10 refused to remain, although urged to do so; in 3 emergency cases the patients were found to be dead on arrival; 8 patients were sent to the Home for Incurables, and 1 was sent to the insane asylum. Of the 653 patients treated, 330 were pay patients. The number of patients in the hospital on Dec. 31, 1905, was 56, viz.: 15 Hawaiians, 2 Chinese, 2 Japanese, 2 Porto Ricans, 3 Koreans and 32 of other nationalities.

Manila Medical Society Affairs.—According to the annual report of the secretary of the Manila Medical Society for 1905, on Jan. 1, 1905, the society had 46 active and 13 associate members. During the year 17 active members were admitted, 2 members have been separated from the society (Drs. Lyons and Miciano); there have been 5 resignations from active and 7 from associate membership, and one transfer from associate to active membership. The society consists at the present time of 56 active and 5 associate members. Since its organization there have been 74 active and 15 associate members. Of the active members 12 have resigned, 4 have been separated

and 2 have died. Of the associate 9 have resigned and one has become an active member. The card index of the physicians of Manila has been kept up to date and corresponds with the list kept by the bureau of health. It shows that there are in Manila 230 licensed physicians, and that there are but 153 licensed practitioners of medicine outside the city of Manila. Of the practicing physicians in Manila about one-fourth are Americans. In the city of Manila there is one physician to about 1,000 people. The report expresses satisfaction at the increased number of Filipino physicians who have applied for membership in the society, which has on its roll Filipino, German, English, Japanese, Chinese and American representatives. Undoubtedly much interest in the society was aroused by the last annual meeting of the association, and this result is a sufficient reason for the most strenuous endeavors on the part of the members of the society to make the coming meeting and other subsequent meetings of the association increasingly interesting. There is great lack of interest, however, in the scientific work of the society. There must be some aspects of individual practice in Manila that would be interesting to the members, some points in diagnosis or treatment that could be cleared up by discussion. There is a valuable working library in the bureau of science from which much direct and collateral information could be drawn and presented to the society. There is always a chance for research work in the laboratories. The report states that there is no reason why the society should not become a great power for good in the Far East, and why it should not be a very influential factor, not only in the dissemination of the facts of medicine in general and tropical medicine in particular, but also in the institution and carrying out of such legal reforms as bear on medical work in general. With the institution of the medical school the society may have a larger sphere of influence. By the promulgation of the principles of medical ethics a great change would be wrought through the rising generation, and by taking pains to interest the students in the work of the society, a scientific and useful body of men may be trained to spread clean medical customs throughout the islands. This, after all, is the most useful function of the society. Unscrupulous men may be turned out of the best clinics, but with the ever-present influence of a body of conscientious well-trained men, quackery may be reduced to a minimum. All this looks forward naturally to the establishment of affiliated provincial societies, in order that throughout the islands the same influences may work, and that in time better and more complete knowledge of health conditions may be accumulated. The participation of the physicians of the Army and Navy has been a continued source of pleasure and profit. The permanent resident members of the society appreciate their active assistance. The secretary states that the retrospect is comparatively bright, and the prospect brighter. The treasury is comfortable. There should be every hope for continued growth, prosperity and usefulness.

FOREIGN.

Medical College for Pekin.—The Union Medical College, which was established by the five Protestant missions, was formally opened February 13.

Epidemic Cerebrospinal Meningitis in Germany.—The official bulletins state that 61 cases of epidemic cerebrospinal meningitis were reported in upper Silesia in the course of December, with 34 deaths. Several cases have also been reported from the Duisburg district.

Successor to Nothnagel at Vienna.—Nothnagel's vacant chair has been offered to Quincke of Kiel and to Strümpell, but each declined the honor. Minkowski of Greifswald and von Noorden of Frankfurt-on-the-Main were then proposed by the Vienna faculty of medicine, and late advices state that von Noorden has accepted.

Approaching International Medical Congress.—The American national committee has sent THE JOURNAL a list of the American physicians who have signified their intention of attending the International Medical Congress which convenes at Lisbon, April 19. The list is a long one and includes many prominent names. See also THE JOURNAL of Jan. 20, 1906, page 207.

International Cancer Congress.—The inauguration of the new Cancer Institute at Heidelberg next September is to be accompanied by an international "congress of cancerology." The local authorities have pledged themselves to support the cancer institute for fifty years. It was erected by popular subscriptions, Czerny heading the list with a large sum. Nearly $200,000 has already been raised. As already mentioned, Czerny has resigned his chair of surgery and will devote his energies henceforth to the cancer institute.

Typhus in Mexico.—Dr. Hamilton of the Public Health and Marine-Hospital Service reports from Laredo that a sanitary campaign is to be inaugurated to prevent the spread of typhus fever in the City of Mexico, where it is assuming a grave character. The disease is practically confined to persons who are unable to travel, and, therefore, is not a serious menace to the United States at present.

A Layman at the Head of the Austrian Public Health Service.—The public health and sanitary service of Austria, since the death of Dr. von Kusy, has been placed in the hands of Baron Hein, a lawyer by profession. The Vienna Medical Chamber (Aerztekammer) has presented a formal protest to the government against this appointment of a layman to a position which above all others requires medical knowledge.

German Congress of Surgery.—The thirty-fifth congress of the German Surgical Association will be held at Berlin, April 4 to 7, the date having been advanced a few days so as not to conflict with the International Medical Congress at Lisbon, April 19. The subjects appointed for discussion are: "Military Surgery in the Russo-Japanese War," with addresses by participants; "Surgical Treatment of Gastric Ulcer"; "High Rectal Cancer," and a general discussion of Bier's congestive hyperemia in the treatment of acute inflammations.

Cancer Research in Natal.—A local committee has been formed in Natal to co-operate with the Imperial Cancer Research Fund. The occurrence of malignant disease among such colored races as inhabit the colony and among birds, reptiles, fish and the lower animals, is being investigated. All physicians and veterinarians will be asked to give their assistance in the work, and an endeavor will also be made to enlist the sympathies of naturalists and sportsmen. The *British Medical Journal* states that all specimens suspected of cancerous disease are examined, free of charge, at the government laboratories at Pietermaritzburg.

Schaudinn Summoned to Hamburg.—F. Schaudinn of Berlin has been working lately in the Hamburg Institute for Tropical and Ship Diseases, under commission from the Imperial Council of Health. The Hamburg authorities have now decided to invite him to become permanently connected with the institution, the official title of which is the "Institut für Schiffs- und Tropenkrankheiten." He is to be assistant in zoology with a salary of 9,000 marks (about $2,250), and a pension later. The sum of $14,250 has been appropriated to enlarge the institute. Schaudinn's fame as an authority on protozoa was so well established that when he announced the discovery of the *Spirochæta pallida* the world stopped at once to listen, while the words of a lesser authority might not have attracted attention for some time.

Reservoir Leakages and Fever in Bombay City.—The Malabar Hill and Bhandarwada reservoirs in the city of Bombay have leaked for some time and the surrounding areas of ground have been sodden and swamped. The Indian correspondent of the *Lancet* states that associated with this condition these surrounding areas have been fever-stricken and the corporation has now called for a report. Since 1901 the health department has kept the tanks themselves free from mosquitoes, but the danger covers a much wider area. All the pools, surface collections of water as well as the wells and drains must be treated by an active antimosquito campaign pending the repair of the huge reservoirs. The anopheles mosquitoes have been found in nearly all parts of the city, but the pools and swampy places occasioned by these leakages have been their chief breeding grounds.

Von Bergmann Made Senator for Life.—Kaiser Wilhelm has recently appointed von Bergmann member of the upper house of parliament (Herrenhaus) for life. This is the first time that such an honor has been conferred on a member of the medical profession. Küster of Marburg and Förster of Breslau are members of the house, but were elected as representatives of their university towns. Ernst von Bergmann was born in Russia in 1836, and was professor at Dorpat until invited to the chair of surgery at Würzburg in 1878. He served through the Franco-Prussian war and also through the Russo-Turkish campaign in 1877. In 1882 he was called to Berlin to Langenbeck's vacant chair, where he has since been. He is one of the publishers of the *Archiv. f. klin. Chirurgie*, as also of the *Centralblatt* and of the *Sammlung f. klin. Vorträge*, and has long ranked as one of the leading surgeons in the world, and as an able writer on surgical topics.

Plague in Japan.—Passed Assistant Surgeon Moore reports from Yokohama that plague continues to prevail in Osaka and Kobe. No new cases of this disease are reported from Shimonoseki, but a doubtful case is said to have occurred in Nara. The authorities are conducting an active antiplague campaign.

involving considerable expenditure. In Yokohama conspicuous posters are displayed announcing an increase in the number of prizes in the lotteries held for the benefit of captors of rats. Professor Kitasato recently delivered a lecture in Yokohama on plague prophylaxis, advising the dispatch of Japanese officials to India for duty in the consulates there, for the purpose of strictly examining into the sanitary condition of freight shipped from that country to Japan. In support of his position, Professor Kitasato cited the fact that the United States, with a view to keeping out sufferers from eye disease, requires the medical officer stationed in Yokohama to examine the eyes of passengers before embarkation.

Barbieri Endowment at Vienna.—Dr. D. Barbieri, who died recently at Vienna, bequeathed 300,000 kronen (about $75,000), to the university to endow stipends for needy medical students at the first and second surgical clinics. Each beneficiary is to receive $500 a year for three years; the endowment will thus provide for six of these stipends. He qualified his bequest with the condition that it is to be called the "Billroth Endowment," in memory of his beloved chief, Billroth. An obituary notice in the *Wien. klin. Wochft.* states that he was known as Billroth's "faithful Domenico," and always accompanied him when Billroth was summoned away from home for important operations. He was his assistant at the famous first resection of the stomach, and was also the first to introduce massage into Austria from Amsterdam, where Metzger had revived the ancient art of kneading the tissues. Barbieri was also renowned as an anesthetist, scrupulous of his fame that he had never lost a patient from this cause. He was further distinguished by the fact that he never wrote a line for publication and never occupied an official position, although one of the most popular physicians of Vienna. He was especially skilled in the art of keeping hope alive in the hearts of incurable patients.

Endowment of Medical Institutions to Commemorate the Silver Wedding of the Emperor and Empress of Germany.—Our German exchanges report a number of new medical institutions planned to commemorate the silver wedding anniversary of the royal pair. Berlin has appropriated $25,000 for a tuberculosis sanatorium, and Mülheim and Schöneberg and Solingen have made similar appropriations. Magdeburg has appropriated $25,000 for a children's hospital, and Berlin has made arrangements for a model institution for the scientific study of means to reduce infant mortality. The suburb of Charlottenburg has donated a spacious tract of land for the new institution. It is planned for fifty or sixty beds, and will be divided into a number of departments. Women will be received during the last three months of pregnancy. They then enter the maternity, and in two weeks pass to the mothers' department, where they remain three months. Infants which have to be artificially fed are received into another department to which children from outside are also admitted. A ward for sick children will also be provided, and after the mothers leave the institution they can return for consultation at stated periods. In this latter department, similar to the "infant consultations" of France and the one now in operation in Philadelphia, advice will be given to prospective and to nursing mothers, and prizes will be given for nursing, and milk distributed. A model dairy and ample chemical and bacteriogic laboratories will complete the institution. Professor Heubner and the president of the Imperial Council of Health were mainly instrumental in the founding of this model Infants' Home. Vienna has already a similar one on a smaller scale in successful operation. It is the work of a local charitable society called "Infant Protection."

Regulation of Sale of Drugs in Honduras.—Consul Alger of Tegucigalpa reports that there are no regulations or restrictions in Honduras as to the sale of patent medicines. Articles that may be used in pharmacy are specified in the penal code and also the police regulations under which business must be done. Mr. Alger sends the substance of these regulations, which follow:

No prescription shall be filled unless clearly written in the Spanish language, without abbreviations, except those in common use as regards the method of preparation, and must be signed by a regular doctor of medicine.

All prescriptions that are filled must be sealed and numbered, with number corresponding to that of the register kept by the pharmacist, returning to the interested party the original prescription or a sealed and numbered copy of same.

When in the judgment of the pharmacist a prescription calls for the largest doses of a drug that might be prejudicial in taking he will return the same under seal to the physician who issued it, calling on him to accept over his signature all responsibility.

No prescription shall be filled a second time. The physician ordering its repetition shall state how many times repetition is necessary. The prescription is to be dated each time it is put up, adding initials—Rp-a-l (recipe ad integran).

Violation of any of these regulations is punished with a fine of from $50 to $500 and closing of the pharmacy in case of further offense. The commission is made up of the inspector of hygiene, one pharmacist and the agent of police to revise the books and to inspect the condition and quality of drugs and medicines. The medical faculty is informed of the result of revision and inspection. The sale of medicines is positively forbidden at any place except at an authorized pharmacy.

Ideals Proposed for the Organized Medical Profession in France.—Julien Noir's article on this subject is quoted in the *Presse Médicale*, No. 103, and we translate the latter part entire as his suggestions have attracted considerable attention: "If, as we hope," he says, "this movement for closer organization spreads throughout the physicians of France, the now isolated medical societies, when they become federated or united, may be able to play a most important rôle in the future. They will not restrict themselves merely to the defense of the profession and its members, they will form in the body politic a free institution which will, little by little, gradually assume all the official medical functions. A few years ago the authorities of the Lot-et-Garonne department placed in the hands of the medical association for that department the entire task of organizing the free medical assistance for the department. This example may be followed by others, and gradually the local authorities will give up more and more to the organized profession in the various departments the entire system of free medical aid, even including the hospitals. The French law authorizes the departmental medical associations to give advice to the authorities on matters concerning their profession. What concerns the medical profession is a vast field, embracing all that pertains to hygiene and the care of the sick. The medical associations should be able to reply competently to questions asked them, and they should solicit such questions as occasion arises. The medical associations then will not be mere scientific nonentities whose advice is absolutely disregarded by the authorities when they think to ask for it; they will be powerfully organized bodies which will force the hand of the local authorities by the influence which each one of their members exerts on public opinion. Without dropping into commercialism, the departmental medical associations, with the resources at their disposal, might erect a number of scientific establishments which would facilitate the exercise of their profession and benefit their patients. . . . The local and state medical societies will no longer appear as merely works for timid defense, but will become universally regarded as beneficent institutions, indispensable to the welfare of the public. The physician who holds himself aloof from his confrères under the new order of things will find himself at such a woeful disadvantage to the others that he will haste to join. We recognize the fact that these ideals will not all be realized in our day and generation, but we are certainly beholding the dawn of an evolution of this kind. The premonitory symptoms are already apparent. Medical students used to live apart, meeting only at restaurants and similar public places. Care for the future was the least of their preoccupations. We have seen how in the last few years they have organized into associations for friendly intercourse, and quite recently have taken another forward step in organizing and supporting nobly a professional association, the "Corporative des Etudiants de Médecine," at Paris. The young physicians trained in this new association will bear with them into the practice of their profession a new spirit of organization. The young blood pouring into the local and state medical associations will revivify them, and what we now regard as an impossible ideal will be the practical reality of to-morrow." In France and Germany the physicians throughout the country are officially grouped in regional medical associations called syndicates or medical chambers ("syndicats" and "Aerztekammer"). These organizations are entirely distinct from the scientific medical societies that may or may not be organized. They are solely for the regulation of matters affecting the profession materially or socially. They have been described more fully in these columns on page 1435 of volume xlii, 1904. The American Medical Association is so broad in its scope that it practically includes all that is meant by these foreign syndicates and medical chambers as well as all the local and general scientific organizations.

CANADA.

Personal.—Dr. P. H. Bryce, chief medical officer of the Department of the Interior at Ottawa, is in Vancouver, taking over the Detention Hospital in that city.——Dr. Mason W. H. Pitman, Montreal, has been appointed resident physician at the St. Lawrence State Hospital, Ogdensburg, N. Y.

Vancouver Association and Patent Medicines.—The Vancouver Medical Association is taking active steps to have legislation passed in British Columbia to regulate the traffic in patent medicines, and will have the hearty co-operation of the secretary of the Provincial Board of Health, Dr. C. J. Fagan, who has been instructed by the government of British Columbia to act in the matter.

A New Dispensary for Women.—A new dispensary for women only was opened in Montreal on February 1. It will be conducted by women physicians. Dr. Grace Ritchie England, assisted by Dr. Helen Macdonald, will hold a special clinic for diseases of women on Mondays and Thursdays. The clinic will be a free one, but a small sum will be charged for medicines and dressings.

New Medical Society Formed.—The Essex County (Ont.) Medical Association was formed January 26 at Windsor, Ont. Dr. James Brien, Essex, was appointed honorary president; Dr. Hughes, Leamington, president; Dr. Samson, Windsor, vice-president, and Dr. McKenzie, Kingsville, secretary-treasurer. All the physicians in Essex County will be canvassed and an endeavor will be made to unite the entire profession in that county.

Prevalent Diseases.—Typhoid fever is decreasing in Montreal, only 18 cases having been reported in the week ending January 27.——There were only 96 cases of diphtheria in Toronto in January, 1906, against 187 in the same month in 1905; 25 of scarlet fever against 48, and 12 of typhoid fever against 14 in 1905.——Smallpox is reported on the Indian reserve near Vernon, B. C., and Dr. Fagan, Victoria, has gone to investigate.——There is an epidemic of typhoid fever at Fort William, Ont., and it has been necessary to place from 20 to 30 patients in the contiguous hospital of Port Arthur.——Smallpox of a mild type is said to be present at La Riviere, Manitoba.

For a National Sanitarium.—Lord Strathcona, the Canadian high commissioner in England, has written Dr. C. J. Fagan, secretary of the Board of Health of British Columbia, expressing his willingness to contribute to a national sanitarium, where patients with tuberculosis might be gathered together at some point in Canada most suitable for the purpose. Dr. Fagan has been in communication with the different boards of health in Canada, and once the health authorities of the respective provinces and the general public evince a desire to participate in such an undertaking, the movement will be started and Lord Strathcona would then demonstrate that he takes a lively interest in the tuberculosis problem in Canada.

Hospital News.—The fund of the Toronto General Hospital now amounts to $1,113,886, the County of York, in which Toronto is situated, having contributed $15,000.——The total number of patients treated in the Winnipeg General Hospital during the week ending January 27 was 360; of these 224 were men, 94 women and 42 children.——Grace Hospital, Toronto, admitted 106 patients in January. There were 14 births, 11 deaths and 100 patients discharged during that month.——A new ward has recently been added to the Provincial Hospital for the Insane at New Westminster, B. C.——The Manitoba government has given a tract of land containing 1,500 acres for the purposes of a consumption sanatorium at Holland, Man.

Quarterly Meeting of the Ontario Board of Health.—The Ontario Board of Health held its regular quarterly meeting, which was also the annual meeting, in Toronto, January 31 and February 1, 2 and 3. A resolution was unanimously passed advising the government at once to proceed to the establishment of a department of public health for Ontario. At present health matters are administered under the department of the provincial secretary and the minister of agriculture, although it is hard to understand what a minister of agriculture knows about public health. Drs. Kennedy and Oldright, the two senior members of the board, were appointed to represent the board at the approaching International Medical Congress at Lisbon.

LONDON LETTER.

A New Plague Prophylactic.

A preliminary report by Dr. Klein to the local government board on a new plague prophylactic has just been issued. Dr. Klein found that in animals dead from plague when all the bacilli contained in their organs had been killed in the process of drying, emulsions made from the dried material and injected into mice and rats were capable of causing death within twenty hours, with symptoms like those of acute plague, though after death the tissues did not contain the bacillus. He also found that the injection of an amount of emulsion insufficient to cause speedy death produced an illness from which the animals usually recovered. When these animals were then injected with virulent cultures of the bacillus they proved refractory to infection. He concluded, therefore, that the dried organs of animals dead from plague contain a powerful plague toxin which, in appropriate doses, may serve as a prophylactic. Dr. Klein then injected into a series of animals the dried organs (containing organo-toxin and dead bacilli) of various rodents dead of plague with the purpose of ascertaining the protective power of these materials for similar rodents against subsequent infection. Many experiments were made in order to find the best methods of preparing and preserving prophylactic material as well as to determine what portions of the body of an animal dead of plague are the most efficacious. He found that a variety of tissues taken from guinea-pigs dead of subacute plague, finely minced aseptically, spread out in thin layers, on sterile glass dishes, and dried over sulphuric acid at from 46 to 47 C., yield a material which can be rapidly and easily prepared, is of uniform efficacy, and is superior in every way to other prophylactics. A guinea-pig yields from 5 to 7 gm. of dry powder prepared from the bubo, spleen, lungs and liver. The protective dose for a rat is from 10 to 15 mgm. Three days' drying is more than sufficient to devitalize the bacilli contained in the organs. The dry scales resulting are rubbed down to fine powder in a sterile mortar. The powder is transferred to a sterile wide-mouthed bottle plugged with sterile cotton wool, which is kept for two or three days at 37 C. to complete the process of drying. The cotton wool is then replaced by a glass stopper and the prophylactic is ready for use. It can be preserved indefinitely in a dry state by a layer of paraffin over the stopper, and when tested by culture is found sterile. In preparing the prophylactic for use it is rubbed down in sterile warmed distilled water and the emulsion thus made is injected subcutaneously. Dr. Klein has experimented on several dozen white mice, from five to six dozen guinea-pigs and over 150 rats, and finds that the animals are protected against the most virulent bacilli. He concludes that from 5 to 7 mgm. of the dry prophylactic would be a proper dose for a man. A large guinea-pig dead of subacute plague would yield from 800 to 1,000 human doses—an amount of protective material equal to from 3 to 5 liters of Haffkine's fluid prophylactic. As the latter requires from four to six weeks for preparation while the former requires only from ten to twelve days, is produced at a much smaller cost and will keep in the dry state any length of time, the advantages of Dr. Klein's method are obvious.

Action Against a Physician for Mistaken Diagnosis.

An action for mistaken diagnosis has been taken against a physician under outrageous circumstances. A woman was taken ill and after attending her for some days the physician certified that she was suffering from typhoid fever and she was removed to a fever hospital, where the disease from which she was suffering was regarded as doubtful and the physicians thought that it would take a week or longer to say whether or not she had typhoid fever. They suspected typhoid fever and thought that from the symptoms the patient's physician was thoroughly justified in reporting the case as one of infectious disease and in having the patient removed to a hospital. Ultimately it was concluded that the patient was suffering from influenza. The judge said that the action ought never to have been brought, that the physician sent the patient to hospital for proper treatment, and that she had shown her appreciation by bringing the action against him. He gave judgment against her with costs on the highest possible scale.

The Instruction of Civil Practitioners in Military Work.

In any large war of the future recourse must be had to civil practitioners to supplement the army surgeons. Hence the necessity for some system of training in times of peace in military duties. A number of physicians resident in London have expressed their willingness to render assistance in time of war provided they are instructed in the work which they may be called on to perform. A request for such instruction was sent to the director general of the army medical services and he has arranged for a short course of lectures and demonstrations to be given at the West London Hospital on alternate Saturdays at 4 p. m. An attempt will be made to give a broad and practical view of the subject without going much into detail.

Lunacy Action Against Doctors for $50,000.

An action has been brought in Scotland for $50,000 damages by a Clyde pilot against two physicians. They signed medical certificates in September, 1903, under which he was placed in an asylum for four months. He was discharged as sufficiently recovered in January, 1904, subject to certain precautions. At the trial a large number of lay witnesses testified to the man's sanity before he was placed in the asylum. Two physicians who had not seen him also gave evidence on his behalf. Evidence for the defense was given showing that he was insane and threatened to shoot a friend whom he believed to be criminally intimate with his wife, and as to his violence to his wife and son. Not a particle of evidence was given as to any reason for his suspicions of his wife, and his conduct was proved to have been riotous, irritating and dangerous. Both physicians had taken a great deal of trouble with regard to his case. They examined him repeatedly and took every reasonable measure to avoid certifying him—by medical treatment and by sending him to the country. The medical certificates were in proper form, according to the Scottish lunacy law, and the facts indicating insanity observed by both physicians were full and sufficient. On his admission to the asylum the superintendent found him to be insane. Dr. Clouston and Dr. Joseph Bell gave expert testimony as to the sufficiency of the certificates and to the urgent necessity for asylum care in the condition shown by the man on admission both for his own treatment and for the public safety. Judgment was given for the physicians against the plaintiff. The case shows the need of reform of the Scotch law so as to prevent such vexatious actions against physicians who do only their duty. In England such proceedings can be stopped by a judge *ab initio*. The action of the two physicians who gave evidence on behalf of the plaintiff has aroused much indignation and a subscription list will probably be opened to enable the profession to give practical expression to their sympathy with the defendants in the heavy legal expenses to which they have been put through no fault of their own.

School Hygiene.

The report of Dr. Niven, health officer of Manchester, contains some important suggestions on the subject of school hygiene. He points out that the education of children must fail unless they are healthy and well nourished, and that from the ranks of the underfed comes the most abundant supply of the vicious and criminal classes. He thinks that a magnificent opportunity is offered to educational authorities for seeing that the health of children is properly looked after, and that this duty is incumbent on them, since on its performance depends the success of the educational system. The first thing necessary is a race of young women who understand in some degree the duties of a wife and mother. A girl should be grounded in certain domestic branches of knowledge before leaving school. She should know how to cook, sew and mend. She should know how to clean a house and the dangers of filth. She should learn how to clean, manage and feed infants and young children. She should know something of infectious diseases and how to act when they occur. All boys and girls should be taught the elementary principles of personal hygiene. Teachers have so many opportunities of observing their scholars at their tasks, physical exercises and games that they ought to be able to perceive when anything is seriously amiss with their health and should call the attention of the medical officer of the school. The teachers should be instructed in these duties by the medical officers, a procedure which is carried out in Manchester. Training in the management of infants and young children might be carried out in crèches, but they are not quite suitable. What is required is a central hall for teaching purposes, with rooms leading off from it. With this school should be associated a museum of feeding appliances and a teaching kitchen. With the school might also be associated a plant for the modification and sterilization of milk. Further control of the rearing of children should be exercised by means of health visitors or lady inspectors.

An Infants' Milk Depot.

Dr. Newman, the health officer of the metropolitan borough of Finsbury, has published a highly interesting account of the first year's working of a depot formed under philanthropic auspices for the supply of sterilized and modified milk. The depot was established by the Finsbury Social Workers' Association and by funds privately subscribed. It has been conducted on four definite principles: 1, Absolute control of the milk and avoidance of the blunder of sterilizing unclean milk; 2, medical supervision of the entire management of the depot and of the children supplied from it; 3, a discriminating and careful distribution of the milk to only such infants as could not be breastfed, and 4, a systematic study of the effect of milk on the children. The first condition was secured by the effective co-operation of the farmer who supplied the milk. The cows, the utensils and the milkers are kept in the cleanest possible conditions. Immediately after milking the milk is removed and strained through a metal screen. It is then cooled in the open air under cover and at once taken to the laboratory, where the cream is separated and three modifications are prepared, adapted to the needs of infants at different ages. It is then poured into sterilized bottles. In winter the bottled milk is Pasteurized at a temperature from 140 to 150 F. for twenty minutes; in summer it is sterilized at 212 F. for twenty minutes; in midwinter for a period of some weeks no Pasteurization or heating of any kind is done. After Pasteurization the milk is cooled to 53 F. by admitting cold water into the sterilizer and is kept at that temperature until the time of transmission by rail. In summer it is kept on ice until it is distributed. The depot has proved of substantial service in reducing infant mortality, but the use of the milk has not afforded complete protection against autumnal diarrhea. Out of 129 infants fed on it 18 suffered from the disease and 5 succumbed. Dr. Newman concludes that the virus of the disease gained access to these infants through dried dust and dirt, particularly by the use of "comforters" or dummy teats.

Medical Reciprocity with Japan.

At the last session of the General Medical Council, the motion of Dr. Norman that the medical act of 1886 should apply to Japan was carried without discussion. This recommendation of the council was approved at a meeting of the privy council in December last. This will give to Japanese physicians the right to be registered as foreign practitioners in the medical register.

Poisoning by Oil of Eucalyptus.

A man, aged 34, died at Derby from an overdose of oil of eucalyptus, a drug which is not generally recognized as a dangerous poison. He sent to a druggist for three pennyworth and drank the whole—six drams—in an equal quantity of warm water. He became unconscious and was removed to a hospital, where he died two days later. Acute congestion of the lungs was found at the necropsy. A coroner's inquest followed and the jury expressed the opinion that eucalyptus oil should be scheduled as a poison.

Pharmacology

No Longer Members of Proprietary Association.

The Kress & Owen Company, New York City, ask us to announce that they have resigned from the Proprietary Association.

Not for Honor but for Money.

One of our southern exchanges in a recent issue devotes considerable space to defending the nostrum business, proprietors and proprietary remedies. Incidentally, it applies many disapproving adjectives to the Council on Pharmacy and Chemistry of the American Medical Association, to THE JOURNAL of the Association and to the various state journals that have dared to criticise the present intolerable condition of humbug in the business of making and selling "proprietary" remedies. In its opinion: "These manufacturers are not in business just for honor and sentiment, but for the money they expect to get out of their products, and for this very reason it is a guarantee that their products will be all that scientific knowledge can produce, for they know that their purity, efficacy and scientific adaptability to the cure of disease will be put to the test by the prescriber," etc. Exactly. "These manufacturers are not in business just for honor and sentiment, but for the money they expect to get out of their products," in some cases, by lying and swindling, by fraud and misstatement, by almost every sort of graft known to the "patent medicine" manufacturer and his able "adsmith." They can get more money from their products if they mix acetanilid, soda, etc., and sell it at an enormous profit as a "brand new" chemical than they can if they tell the truth. To find out the truth and to tell it is, in part, the task of the Council on Pharmacy and Chemistry. No honest manu-

facturer who is trying to market an honest preparation in an honorable way need have the slightest fear of injury from the council. Candidly, does it not seem time that manufacturers who conduct their business for money only, and without due regard for "honor and sentiment," should receive some little investigating? Does not the result of this investigation convince one that there is, perhaps, too much graft in the business of foisting nostrums on the medical profession? Shall we try to know the truth about these things, or shall we continue to be humbugged and swindled? Is ignorance "bliss," or is it a condition dangerous to our patients and "blissful" only so far as the interests of the manufacturer are concerned?

Reasons for the Stand Taken by Physicians and by Newspapers on the Nostrum Question.

The fight on the nostrum evil recently inaugurated by the lay press was duly seconded by the National Legislative Council in its meeting at Washington (THE JOURNAL A. M. A., Jan. 20, 1906).

The principle of procedure embodied in the crusade now being so ably conducted by Mr. Bok, namely, that of uniform legislation in the various states, was specifically indorsed. Attention was informally called at that conference, however, to the well-known fact that the active parti ipation of the medical profession would be misconstrued and that efforts would be made by the opponents of the reform measure to show that the physicians were actuated by sinister motives. An example was the editorial which the *Cincinnati Enquirer* recently directed against the bill introduced in the Ohio Legislature. In reply to this editorial the following letter was sent:

CINCINNATI, Feb. 1, 1906.

To the Editor of the Enquirer:—Your editorial this morning under the caption, "And Why Not?" in opposition to the pending bill to compel the publication of formulæ of "patent" and "proprietary" medicines contains two references which call for reply, viz.:

1. You say that "if the owners of these medicines are to be required to disclose to the world the secret of their compound, why not the doctors who write prescriptions in the Latin text? . . . Obviously, to compel one class to give up the secrets of their formulæ and protect another in not giving them up is not what President Roosevelt calls the 'square deal.'"

In reply it is to be remembered that the prescription of the physician is to-day, under the law, the property of the man who pays for it—in other words, the patient—who is entitled either to retain the original, to make a copy of it himself or to secure a copy from the chemist who compounds it. Prescriptions are, furthermore, kept on file by the dispensing chemist, where they are accessible to all properly interested persons. The trifling circumstance that, for the sake of accuracy and brevity, some, but by no means all, prescriptions are written in Latin does not deprive their owner of a knowledge of their ingredients, for if he can not read Latin himself he can easily find some one who can. It follows, therefore, that now under the law physicians do comply with all the essentials of publicity. In view of this fact it becomes obvious that "to compel one class to give up the secrets of their formulæ and protect another in not giving them up is not what President Roosevelt calls the 'square deal.'"

2. You say, in the next place, that "it would appear as if the authors might not have the public welfare so much at heart as some sinister motive not obviously associated with the health of the people."

Your inference, not expressed, but still an inference, contained in this quotation to the effect that physicians are authors of the bill now pending at Columbus is not justified by the facts. This movement comes from the people as distinguished from the medical profession and from very reputable representatives of the lay press as distinguished from both the medical press and that portion of the lay press which sells its space for the exploitation of fraudulent drugs. As a matter of fact, the incomes of physicians are increased rather than diminished by the unrestrained consumption of these spurious "remedies" by the public. This circumstance was recently, on a very conspicuous occasion, hurled reproachfully at the medical profession from lay sources as an explanation of the aloofness of that profession from the present agitation. But to publish the alleged formulæ of many of these so-called remedies would lead to the exposure of their fraudulent pretensions. This, in turn, would drive them not only from the market but particularly from the advertising columns of certain newspapers. All of which prompts the observation that in opposing the proposed legislation these same newspapers "might not have the public welfare so much at heart as some sinister motive not directly associated with the health of the people."

Trusting that you will publish this communication in the interest of "what President Roosevelt calls the 'square deal,'" I am,

Very sincerely, CHARLES A. L. REED,
Chairman of the Legislative Committee of the American Medical Association.

Of course, this communication was not published by the *Enquirer*, notwithstanding its assumed devotion to the "square deal."

Death from Overdose of "Patent Medicine."

A correspondent in British Columbia sends us particulars of the following case:

A male infant two weeks old died after having been given three drops of a preparation containing opium. The child was apparently suffering from colic and his mother gave him "a few drops (three)" of Chamberlain's Colic, Cholera and Diarrhea Remedy. The mother said that the child had seemed to be in a stupor most of the day. At the inquest the child's father testified that the remedy was given about midnight Saturday night, or early Sunday morning. The child died at 11 p. m. Sunday. On the label of the bottle it is stated that the dose for an adult is one teaspoonful and for an infant from two to fifteen drops. Dr. Fraser, the physician in attendance, testified that fifteen drops would be absolutely fatal to an infant. The coroner, Dr. E. C. Hart, addressing the jury, said:

There can be no doubt but that death resulted from misadventure or accident. The jury must find a verdict on the evidence, but may also comment on the evidence or make any rider it thinks fit to its verdict. Of course, there is much sympathy to be felt for the parents. This medicine, like other patent nostrums, is sold in drug stores to anyone and everyone, without a prescription. The bottle produced contained eight grains of opium. Without treatment the taking of that amount would be fatal to a man under ordinary circumstances. Eight grains of opium could not be sold by a druggist; it is against the law for a druggist to do so. The patent medicine bottle, however, says nothing about what the nostrum contains. The dose for an adult is given as 1 teaspoonful, and for infants from 2 to 15 drops, which would be one-fourth grain of opium and positively fatal to an infant. Two drops might not be fatal, but all we know that this infant received was three drops. Many infants have been poisoned by so small an amount of opium as that in two drops of the medicine. It is what is known as a patent medicine, and we do not know what other things it contains. Opium varies in effect. In making opium preparations the chemist analyzes the opium, and if he has a poor specimen of the drug a larger amount is used, and vice versa.

Quack medicines are made in an uncertain and irregular style, and it is quite possible the bottle of medicine Mr. Duncan had contained more opium than ordinarily. On the other hand, it may be that the medicine is also standardized so that each bottle holds the same. At any rate, as far as this case is concerned it seems to have been fatal to the child. It is an anomaly of our laws that a mixture of this kind, which is positively dangerous, may be dispensed, while the law is so strict about poisons. This is stated in explanation. You are only required to bring in a verdict in accordance with the evidence submitted as to the cause of death, but you have the privilege to add any rider that you may see fit to do.

The coroner's jury brought in a verdict that the child died from the effects of opium contained in Chamberlain's Colic, Cholera and Diarrhea Remedy, given to the child without knowledge of the fact that the medicine contained opium, and that death resulted by misadventure.

A Warning from Fougera & Co.

The following letter has been received:

W. J. MORRISON, JR., COUNSELOR AT LAW,
43 BROAD STREET, NEW YORK, Jan. 29, 1906.

George H. Simmons, M.D., Council on Chemistry and Pharmacy, American Medical Association, Chicago, Ill:

Dear Sir:—Messrs. E. Fougera & Co., of 90 Beekman street, New York City, as agents for several preparations intended solely for the use of the medical profession, and to which certain registered trademark

names have been given, inform me that in the literature relating to these preparations they have given the full qualitative formulæ, and in many cases the full quantitative formulæ and even the *modus operandi* of manufacture.

They have also informed me that your Association proposes to make analyses of these preparations, which, together with certain comment and criticism, are to be published by the said Association.

My clients request me to state that they do not desire the publication in the proposed pharmacopeia of "New and Non-Official Remedies" of any formulæ to which are added synonymous terms, stated to be identical with the preparations sold under the trade-mark names of the firms they represent as agents; and as counsel for the above firm I wish to warn you against the publication by the American Medical Association or the Council on Chemistry and Pharmacy of any false or inaccurate statements relating to the articles for which Messrs. E. Fougera & Co. are the selling agents. Yours truly, W. J. MORRISON, JR.

It is a pleasure to give publicity to the above letter, that our readers may know the attitude taken by E. Fougera & Co. toward the work of the American Medical Association through its Council on Pharmacy and Chemistry. Since a number of the products for which this firm is the selling agent are already advertised directly to the laity, this action is not to be wondered at. We wish to state again that the annual to be known as "New and Non-Official Remedies" is presumed to contain, as nearly as possible, only those preparations intended solely for physicians' use. E. Fougera & Co., therefore, need have no fear regarding the listing of their preparations.

Santal Midy is one of the preparations which Fougera & Co. are advertising to the public. This advertisement is reproduced (without permission) from the *Chicago American* of Sunday, Feb. 11, 1906.

Gonorrhea cured in two days! And this is an "ethical proprietary" advertised in reputable medical journals! ! !

Eade's GOUT Pills
Instantly Relieve and rapidly Cure
GOUT, RHEUMATISM, RHEUMATIC
GOUT, SCIATICA, LUMBAGO and all
pains in the head, face and limbs.
At all Druggists or
E. FOUGERA & CO., Sole Agents, N. Y.

This advertisement, taken from the *Chicago Record-Herald*, Feb. 14, 1906, shows another one; there are others, but we have no more space to spare at this time.

The Physician and the Pharmacopeia.

NEW YORK, Feb. 11, 1906.

To the Editor:—You are certainly aware that I had something to do with the present warfare against nostrums. But wholesale indiscriminate denunciation I condemned from the very beginning, and especially have I no sympathy with those who, out of sheer ignorance, try to make a bible, a fetish, out of our Pharmacopeia and want to make it an unpardonable sin to prescribe or to use anything extrapharmacopeial. How absurd this tendency is will be seen from a little illustration in a day's practice of my own. I trust it will be admitted that I know as much about drugs as the average physician and know fairly well what is best for my patient. Well, on looking over today's work I find that I washed out a man's bladder with oxycyanid of mercury; I administered two injections of salicylate of mercury; I prescribed pills of tannate of mercury; I used and prescribed injections of protargol and argyrol; I used eucain as a local anesthetic, and I used several times a proprietary lubricant for the sounds. Here I have used seven different substances, not one of which is official in the Pharmacopeia. Of the seven products, the first three were non-proprietary and the other four proprietary. Would anybody have the hardihood to tell me that I should not have used those substances, or that my patients could have gotten along with other agents official in the Pharmacopeia and just as good? No. In the name of commonsense, let us not become hysterical. The Pharmacopeia is a good book, it is a book of standards, but in the very nature of things it can not be a perfect book. It is generally ten years behind the times, and when it does appear it is hedged about with so many restrictions about the admissibility of some of the most valuable of our preparations that the Pharmacopeia can only be an authority as to the preparations which are in it, but it can be no guide as to the usefulness or worthlessness of the preparations which are not found in its pages. WILLIAM J. ROBINSON, M.D.

ANSWER.—We do not believe that any one suggests that we should be limited to Pharmacopeial preparations or that the Pharmacopeia contains all that is good. The Pharmacopeia does not include articles that are proprietary in character, consequently the patented products are not found in it, at least not until the patent has expired or is about to expire. There are excellent preparations of this class on the market that will undoubtedly appear in future issues of the Pharmacopeia. Would it not be absurd to say that these preparations must not be used until they are in the Pharmacopeia? There are also excellent non-patented pharmaceutical preparations that are a credit to American pharmacy, and yet they are proprietary in character and, therefore, not in the Pharmacopeia. We certainly see no objections to their use. If all proprietary articles are to be condemned, what is the use of the Council on Pharmacy and Chemistry? Are its functions not to examine into proprietary articles and publish a list of those which come up to the standard? Our correspondent, like too many others, has set up a straw man to knock down. We acknowledge that some are using the word "proprietary" in a loose way, but we doubt if any one would suggest debarring all proprietaries. It is the frauds and the fraudulent methods of promotion that are to be condemned.

The Physician Secures the Contempt of the Thoughtful Pharmacist.

Jacob Diner, according to the *Pharmaceutical Era*, has been carrying on a vigorous campaign in New York in favor of the preparations of the Pharmacopeia and the National Formulary, and, before the meeting of the New York County Medical Pharmaceutical League, he recently made some very strong statements concerning the evils that are caused by physician's prescribing proprietary preparations instead of writing prescriptions to fit individual cases. He traces the history of the origin of this flood of proprietary preparations from the time when physicians prepared their own drugs down to the era of elegant pharmaceutical manufacture by well-established houses. He says further:

"But the human mind was ever so constituted that it could not view success without envy. The success gained by some of the manufacturing chemists by reason of original discoveries immediately brought on such a flood of so-called proprietary preparations that pharmacy sank from the position of handmaiden of medicine to that of servant girl of the manufacturer. No professional pharmacist objects to dispensing preparations which are the outcome of discovery or original research. But when he is called on to dispense any of the numberless St. Louis chemicals, when a physician wants him to act as his private dividend developer by dispensing the original discoveries of concerns in which he is interested, then the professional pride of the pharmacist rises up and revolts. In the eyes of the professional pharmacist, the physician prescribing any of these preparations is either an ignoramus or a charlatan, or both, mostly both."

The above language is vigorous. It is worth while to know the frank opinion of the pharmacist; as we have said before, it will be of benefit to us. But Mr. Diner has more to say which it is well worth our while to quote in full:

"With chemicals, even of those protected by patent, which are really scientific discoveries, he can easily assume responsibility. Chemical tests are at his command. But what can he do with preparations which never had a chemical test and never could have a chemical test, because they are mechanical mixtures, and because the manufacturers can and do change their composition at will. The M.D. who prescribes these preparations is on a par with the customer who buys Lydia Pinkham's, or Father John's, with this difference, that the layman who takes the statements of the manufacturer for truth pays for it himself, while the doctor makes the patient pay for it and often gets a little rakeoff from the manufacturer in the shape of discount.

"Let us now view the effect which the prescribing of such remedies has on the three classes most affected.

"First comes the physician. After the detail man or the manufacturer's ad. has insulted the M.D.'s intelligence by telling him what to prescribe, the manufacturer proceeds to separate the doctor from his patients in a most ingenious manner. He tells the M.D. that to insure the genuineness of the preparation he must write for an original bottle. Right here he undermines his friend, the M.D., for before very long the article has been so well introduced by the aid of the guileless M.D. that the people buy it over the counter without paying the M.D. his fee for recommending it. This is the financial phase for the M.D.

"There is also another phase. When the M.D. has become accustomed to let the detail man think for him, he has given up medicine thinking altogether. His first impulse after diagnosing a case is to call for some proprietary remedy irrespective of what its actual constituents may be, without regard to idiosynerasies in the patient and without the possibility of knowing what secondary effects that particular dope may produce. Often he is puzzled by what he supposes to be newly developed symptoms, which are nothing less than after-effects from some of the constituents of the (to him) unknown remedy. The effect on the patient is a matter not to be lightly passed over. We pharmacists often have occasion to judge it.

"I will relate an incident which happened not long ago in my store. A lady brought in a prescription asking for a proprietary tablet whose chemical test consists of the monogram on top. After receiving the medicine she opened the box, and on discovering that the tablets were old friends of hers which she had been buying in 25-cent boxes over the counter, she said some very uncomplimentary things about the M.D., and wound up by declaring that hereafter she would consult a doctor who wrote 'real medicine.' The evil of self-medication is largely due and directly attributed to the prescribing of proprietary preparations by the M.D.

"To compel the druggist to dispense preparations of this ilk is to rob him financially and to insult him professionally. He is compelled to stock up on forty to fifty acetanilid preparations, the numberless bromid mixtures, the legion of dope cure-alls, simply because the physician is too indolent or too ignorant to compose his own prescriptions."

Mr. Diner certainly makes some very pointed criticisms, but we are compelled to admit that there is a basis of truth for them.

Letters of Appreciation.

Dr. J. B. Carrell, Hatboro, Pa., writes:

"I have read with much pleasure and profit your department of Pharmacology, and especially the work done by the Council on Pharmacy and Chemistry in exposing the untruthful methods of patent-medicine manufacturers and vendors. I earnestly hope you will keep everlastingly at it; for these gormandizers are barely satisued with the blood of the innocent babe and helpless old age. Readers of these exposures have had their eyes opened as never before, and the work done by the lay and medical publications deserves the highest praise."

Dr. F. S. Spearman, Whiting, Iowa, writes:

"I have derived considerable benefit from the articles by the Council on Pharmacy and Chemistry. It is doing good work for the profession in showing us just what some of these proprietaries are. A case recently occurred in one of my families in which a woman manifested alarming symptoms of collapse after taking the ordinary dose of bromo-seltzer. I was enabled to show her what the cause was, and now bromo-seltzer is tabooed in that family."

Dr. Max Goldman, Kansas City, Mo., writes:

"No one can justly deny the evil consequences of the modern indiscriminate use of patent medicines. The evil exists, however, and a strong reason, in my judgment, is the fact that in the advertisement as well as in the sale of this rubbish there is an enormous profit. We have then to contend not only with the proprietors of the advertising media, but also with the manufacturers and owners of the quack medicines. The medical profession, being of no pecuniary benefit to the public press in most localities, makes its earnest protest to deaf ears when it attempts to convince the newspaper owners of the pernicious influence of such advertisements. Nevertheless, there is every reason to feel that the American people, so ready to learn if proper suggestions are offered them, have already decided against the use of patent medicines; if so, the task of wholly prohibiting their manufacture, sale and advertisement will be much more easily accomplished.

"As regards the part the American medical profession should play in this and similar crusades, it seems to me most natural that the county society should be ever ready to stand as an individual on questions of such vast proportions."

Dr. John Fassett Edwards, Manila, P. I., writes:

"Accept my sincere thanks for the arrangement of the matter, and likewise my very hearty New Year's greetings, with particular reference to your most excellent work with regard to the 'patent-medicine' evil—it's several steps in the right direction.

Dr. O. P. Voigt, Gillett, Wis., writes:

"Keep on with the good work and the medical profession will be something anyway by the time we get through."

Dr. George W. Rall, Pittsburg, Pa., writes:

"This is just a word of appreciation; first, for the numerous changes in binding (separate cover, index on and inside cover; number, date and page on edge of cover—all of which makes THE JOURNALS unbound still useful for reference); second, for the thorough, careful, persistent and well-thought-out campaign against improper proprietaries of all kinds."

Dr. H. F. Curtis, Fiskdale, Mass., writes:

"I am glad to see the good work you are doing."

Another Newspaper Speaks Out.

In announcing the defeat in the Mississippi legislature of the Lockwood bill, which provided that all proprietary medicines which contain over 5 per cent. of alcohol or a poison should so state on the label, the *Reveille* of Natchez, Miss., says:

The death of this meritorious measure was brought about by the "patent medicine" houses, which, in addition to their untiring efforts with the legislature, whipped the mercenary newspapers into line by threats.

The *Reveille* received a number of these letters, all of which, with the exception of one, demanded that the influence of the paper be used to defeat the bill. One telegram ordered that we telegraph the representatives from this county to use their influence to defeat the measure. This paper never expects to sink so low that, for the sake of a small money consideration, it will oppose a measure which is calculated to result in lasting good to the people of the state; and, instead of trying to prevent the passage of such a bill when it is again brought up, we mean to do all in our power to aid its passage.

Correspondence

Medical Forgeries.

KINGSTON, ONT., Feb. 10, 1906.

To the Editor:—In THE JOURNAL, February 3, there is an article on "Medical Forgeries," by Dr. Van Meter, in which the senate of Queen's University is criticised for not immediately cancelling the degree granted in 1904 to Hagen Burger. In this university, however, the rights of graduates are very carefully safeguarded, and so serious a procedure can not be undertaken except on evidence which will hold in any court of law.

In an earlier portion of his article Dr. Van Meter writes: "The Colorado medical statute has no provision for the revocation of a license except on the ground of the conviction of the licentiate of conduct of a criminal nature." So it is evident that his own state board, as well as those of Massachusetts and Montana, do not find it so simple a matter to revoke even a license to practice.

The fact is that if the state board of Colorado had done its duty and convicted Hagen Burger of the criminal charge of offering false and forged evidence it would be possible on the presentation of the court record for the senate of Queen's University to cancel the degree. The senate has urged on the state board of Colorado the propriety of going on with the trial as the most direct way to bring the matter to a conclusion. Dr. Van Meter makes lame apologies for this not being done, but at the same time demands that the university convict Hagen Burger or—he will place certain disabilities on all our graduates who go to Colorado. We rely on the good sense of the profession in the State of Colorado to see that nothing so unjust is done. If necessary the matter will be laid before the Department of State.

It is true that the senate has the matter under consideration. Hagen Burger was summoned and appeared before the senate on December 20, 1905. After a lengthy trial the evidence was considered insufficient to convict and a postponement was advised by our solicitor to secure further information. It may take some time to secure this. Two members of the senate will be in Germany in a few months, and they have been asked to secure the evidence desired. The death of Dr. Herald, who was secretary of the faculty at the time Hagen Burger was here, has added to our difficulty.

Our graduates and friends may depend on everything being done to protect the dignity and honor of their alma mater, and they must be gratified to learn that none of the rights and privileges of any graduate can be lightly revoked.

For their information I desire only to add that Hagen Burger was introduced to the faculty by a physician known to be an honorable man. His name appeared in Polk's register as qualified in Montana and as a graduate of Kiel University. He attended lectures in the session of 1902-3 and failed to pass at the end of that session. He then went to Boston and engaged in practice and was known to be studying there. One year and five months later he returned and then passed the supplementary examinations and was granted his degree.

J. C. CONNELL,
Dean Medical Faculty, Queen's University.

Quinin in Cholera.

COLUMBUS, OHIO, Feb. 5, 1906.

To the Editor:—I see in THE JOURNAL, February 3, what I have looked for for a generation—some acknowledgment of the truth that quinin sulphate is a specific for Asiatic cholera. In brief, Dr. Ussher, a medical missionary at Van, Asiatic Turkey, found himself, about a year since, in the midst of an outbreak of cholera, so severe that in the first week of its prevalence all that were seized with the disease died—100 per cent. mortality. On Saturday night at midnight he began to treat the disease according to my directions (10 gr. quinin every hour until discharges were controlled), with the result that the mortality fell to less than 10 per cent. Some of your readers may recall that in my article in the *New York Medical Journal*, Aug. 18, 1904, I set the necessary mortality from the disease at somewhere between 5 and 15 per cent., when the remedy is given by the mouth (the only way it should be given), and, preferably, in acid solution or a powder stirred up in a tablespoonful of water, as I gave it during the epidemic in this city in 1873.

The scientific part of Dr. Ussher's statement is somewhat obscure. So far as I know, Professor Koch had only demonstrated that in strength of 1/5000 the growth of the spirilla was inhibited. Dr. J. C. Graham, at that time bacteriologist of Starling Medical College (now of Denver), at my request undertook further experimentation, by which he demonstrated that in strength of 1/2500 the germ was killed in cultures in a few minutes.

For thirty years I have been drilling into the largest average medical classes in Ohio (save those of one school) that Asiatic cholera is a very curable disease when this remedy in sufficient doses is given by the mouth; that the treatment has been discovered over and over again; that quinin is useless given by the hypodermic and intravenous injection methods, as it escapes by the kidneys, never gaining access to the intestinal canal in any sufficient amount. When your last issue arrived I had an article in course of preparation, but I shall probably now await the news from Turkey in Asia. I have written to Dr. Ussher for fuller particulars about the outbreak.

To avoid misunderstanding now or in the future, I wish to state that until after I had used the remedy in 1873 I had never heard of the quinin treatment.

ERSKINE B. FULLERTON, M.D.

Trip to Europe After the Boston Session.

WORTHINGTON, MINN., Feb. 8, 1906.

To the Editor:—No doubt there will be a number of the physicians attending the annual session of the American Medical Association at Boston, June 5-8, who will sail for Europe at the close of the session. A small party has already been formed to sail immediately after the session, and we would be glad to hear from others who are contemplating a trip, either for postgraduate work or for pleasure. The postgraduate courses in Berlin will be unusually good this year.

HENRY WIEDOW, M.D.

Association News

A Great Professional Federation.

Under the above caption the *Boston Transcript* has an editorial, January 31, on the American Medical Association and on the Boston session that is worth reporting in full. It follows:

The session of the American Medical Association, which will be held in Boston on the 6th, 7th and 8th of June next, is a matter of unusual interest not only to the physicians of the country, but to the whole community. It is forty-one years since the last Boston session of this famous organization, and the growth of the Association since 1865 has been notable. Probably no organization of professional men means so much to the community at large. The American Medical Association was founded in 1847, with the declared object of improving the standard of medical education, and by that means of raising the status of the profession, and benefiting the country. While this purpose has been kept constantly in mind, the Association has exerted itself in many other fields. It has effected important reforms in public hygiene; it has impressed on legislators the value of laws relating to the betterment of the condition of the laboring classes in tenements and factories; it has preached the wisdom of a proper medical supervision of immigration; it has urged the supreme importance of healthful surroundings and care for growing children; it has pointed out the dangers and the methods of combating contagious diseases, and in manifold ways it has added materially to the alleviation of sickness, the lowering of the death rate, the suppression of quackery and the prolonging of human life. The means to forward these useful purposes form an interesting chapter in themselves, which we purpose to comment on from time to time.

The actual membership in the Association at present is about 20,000, but this figure by no means represents all the physicians who are brought under the influence of the organ-

ization. The Association was reorganized on a broad basis in 1902, and the second article of its constitution states that "The object of this Association shall be to federate into one compact organization the medical profession of the United States, for the purpose of fostering the growth and diffusion of medical knowledge, of promoting friendly intercourse among American physicians, of safeguarding the material interests of the medical profession, of elevating the standard of medical education, of securing the enactment and enforcement of medical laws, of enlightening and directing public opinion in regard to the broad problems of state medicine, and of representing to the world the practical accomplishments of scientific medicine." The federating of the medical profession is in large part accomplished. This has been done by securing the active co-operation of the various state medical societies so as to form an organic whole. These state societies bear to the American Association a relation somewhat similar to that borne by the state legislatures to the United States Senate. The federated state societies send delegates, who constitute the House of Delegates of the Americ n Association. At the same time there are many members of the state societies not members of the American Medical Association, so it is obvious that the House of Delegates represents many more persons than are members of the American Med.cal Association. The total number of American physicians thus actually represented by the governing body of the Association is roughly estimated at about 46,000.

It is expected that the coming session of the Association will be the largest ever held. Fourteen or fifteen thousand persons will attend, and the physicians of Boston, with the co-operation of their New England brethren, are planning an elaborate entertainment suitable to the importance of the occasion, the dignity of the situation and the scientific and hospitable reputation of the city. When we look back on Boston's achievements in scientific medicine, and remember the work of New England physicians in the past—that here inoculation for smallpox was independently produced in 1721, that Boston furnished the first physician general in the Revolutionary armies, that in 1818 the office of surgeon general in the United States Army was created for a Boston surgeon, that the vaccination for smallpox for the first time in this country was undertaken here in 1801, that surgical anesthesia was discovered here in 1846; and when we regard the recent work in diphtheria, smallpox, scarlet fever, and in general and orthopedic surgery; the leading position always held by Harvard in medical education, the splendid traditions of our great hospitals, and the famous medical names among us, Boylston, Warren, Waterhouse, Jackson, Holmes, Bigelow, Bowditch, Howe, Homans and many more—when we recall these facts we are justified in a proper pride, and a confidence that the profession and the community will not be found lacking at this time. We may be sure that Boston physicians will respond in a way to produce a scientific entertainment of the highest merit, and we have no doubt that our public-spirited citizens generally, when called on, will co-operate in their usual generous fashion with social and financial aid.

Though the meeting is scheduled to last four days only, great numbers of our visitors doubtless will spend many weeks in this vicinity. The work of our great public institutions will attract hundreds of thoughtful persons from this country and from Europe, and the charms of New England as a summer resort will induce many to tarry with us beyond the allotted time. We feel confident that this meeting will add to the prestige of Boston as the great educational, philanthropic and scientific center of the country.

Senn Medal Essay Contest.

The Committee on the Senn Medal announces that a gold medal of suitable design is to be conferred on the member of the American Medical Association who shall present the best essay on some surgical subject. The award will be made under the following conditions: (a) The name of the author of each competing essay must be enclosed in a sealed envelope bearing a suitable motto or device, the essay itself bearing the same motto or device. The title of the successful essay and the motto or device is to be read at the session at which the award is made, and the name of the successful author announced. (b) All successful essays become the property of the Association. (c) The medal shall be conferred and honorable mention made of the two other essays considered worthy of this distinction at a general meeting of the Association. (d) The competition is to be confined to those who, at the time of entering the competition, as well as at the time of conferring the medal, shall be members of the American Medical Association. (e) The competition for the medal will be closed on, and no essays received after, April 1, 1906. Communications may be addressed to any member of the committee, which consists of the following: A. F. Jonas, chairman, 18 Continental Block, Omaha; J. F. Binnie, 12th and Wyandotte Streets, Kansas City, Mo.; Harry M. Sherman, 1303 Van Ness Ave., San Francisco, until April 15, 1906.

Marriages

JAMES J. MCGUINN, M.D., to Miss Helen Mabel Carroll, both of Chicago, February 14.

ADOLPH F. MORGENSTERN, M.D., to Miss Alma Doepke, both of Cincinnati, January 31.

J. CHRISTY CONDIT, M.D., Windsor, Cal., to Miss Bertha Alma of Mentone, Cal., January 27.

THOMAS L. WILSON, M.D., to Miss Allie M. Carroll, both of Piedmont, W. Va., January 17.

JOHN LEONARD WRIGHT, M.D., to Miss Myrtle Davidson, both of Elbridge, Tenn., February 4.

JAMES WILBERT CANADY, M.D., to Miss Jeanette Bay Ferris, both of Indianapolis, January 30.

LLOYD RUSSELL MACE, M.D., Philadelphia, to Miss Agnes Biller of Trenton, N. J., February 15.

HENRY W. KRIEGE, M.D., St. Louis, to Miss Rose Dorothy Bolm of Warrenton, Mo., February 1.

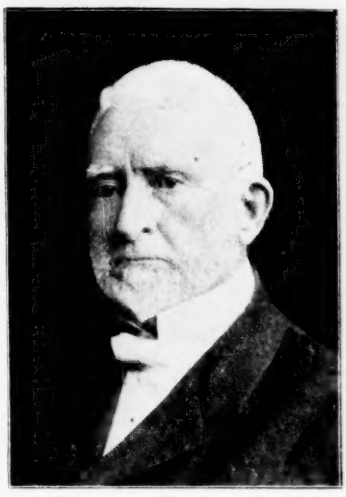
FRANK S. BISSELL, M.D., Maple Lake, Minn., to Miss Blanche Stanford of Minneapolis, Minn., February 7.

CLARENCE J. SLOCUM, M.D., Pleasantville, N. Y., to Miss Elvira Gwendolyn Evans of Tottenville, L. I., January 17.

GEORGE JUSTICE EWING, M.D., Fort Washington, Pa., to Miss Mary E. Cross of Fitchburg, Mass., at Trudeau, N. Y., January 18.

Deaths

Elisha Hall Gregory, M.D., of St. Louis, president of the American Medical Association in 1886, died at Ormond, Fla., February 11, from heart disease, aged 81. Dr. Gregory was born near Russellville, Ky., Sept. 10, 1824. He received his early education in the common schools of Hopkinsville, Ky., and Boonesville, Mo., then studied medicine with Dr. F. W. G. Thomas and entered the medical department of St. Louis University, from which he graduated in 1849. In 1851 he became connected with his alma mater as demonstrator of anatomy. In 1852 he was made professor of anatomy and held this position until 1867, when he was elected professor of surgery. When the Missouri Medical College and St. Louis Medical College were merged and became the medical department of Washington University, Dr. Gregory had a large share in bringing about the consolidation. Early in his practice he became connected with the Mullanphy Hospital, St. Louis, and for many years was its surgeon-in-chief. He was a member of the St. Louis Medical Society and in 1863 its president, and was also at one time president of the St. Louis Surgical Society. Three weeks



ELISHA HALL GREGORY, M.D.

before his death Dr. Gregory went to the South on account of his health, and died there after a short illness.

De Saussure Ford, M.D. Medical College of Georgia, Augusta, 1856; the Nestor of the medical profession of Augusta, surgeon on the staff of General Humphrey Marshall and later in charge of the Third Georgia Hospital, Richmond, during the Civil War; professor of anatomy in his alma mater for seventeen years and then professor of surgery; three times dean of the faculty of the college and occupying that position at the time of his death; one of the founders of the Augusta City Hospital and repeatedly chairman of the governing board; president of the State Medical Association and chief surgeon of the Georgia Railroad; identified in a marked degree with many educational, charitable and municipal institutions of Augusta, died at his home in Augusta, February 5, after an illness of ten days, aged 71. At a special meeting of the faculty of the Medical College of Georgia resolutions of respect and regret were unanimously adopted.

Samuel R. Wooster, M.D. Medical Institution of Yale College, New Haven, Conn., 1857, of Grand Rapids; assistant surgeon of the Eighth Michigan Volunteer Infantry, and later surgeon of the First Michigan Volunteer Cavalry during the Civil War; county physician for Kent County from 1872 to 1889; health officer and city physician of Grand Rapids in 1880; at one time coroner of Kent County; a member of the Michigan State Medical Society, and a charter member and twice president of the Grand Rapids Academy of Medicine, died at Butterworth Hospital, Grand Rapids, February 5, after an operation for a chronic ailment, aged 75.

Adolph Gustave Brown, M.D. Jefferson Medical College, Philadelphia, 1896; a member of the American Medical Association, the Medical Society of the State of New Jersey, Monmouth County Medical Society, and Practitioners' Society of Eastern Monmouth; eye and ear surgeon of the Monmouth Memorial Hospital, Long Branch; town commissioner of Redbank, N. J., from 1903 to 1905; designer and inventor of the Redbank sewage disposal plant, died at his home in Redbank, January 21, from cerebral hemorrhage, after an illness of a year and one-half, aged 45.

Richard Albert Terhune, M.D. College of Physicians and Surgeons in the City of New York, 1850; one of the oldest physicians of Passaic, N. J.; first president of the village of Passaic and twice thereafter holding that position; first city physician of Passaic and first president of the board of health; one of the organizers of the Passaic Medical Society and an incorporator of the Passaic General Hospital Association; secretary of Passaic County Medical Society, 1852-1854, died at his home in that city, February 5, from intestinal cancer, after a long illness, aged 77.

John Winsor, M.D. Berkshire Medical College, Pittsfield, Mass., 1865; one of the oldest practitioners in the Pawtucket Valley; a member of the American Medical Association; for several years a member of the General Assembly; a surgeon during the Civil War; health officer of Coventry and medical examiner of the first district of Kent County, died at his home in Quidnick, Anthony, R. I., February 1, after an illness of nearly a year, from pulmonary tuberculosis, aged 62.

William Edward Swan, M.D. College of Physicians and Surgeons in the City of New York, 1890; a member of the American Medical Association, New York State Medical Association, Medical Society of the County of New York, Medical Association of the Greater City of New York, and fellow of the New York Academy of Medicine, died at his home in New York City, February 3, aged 39.

Robert H. Rice, M.D. University of Michigan Department of Medicine and Surgery, Ann Arbor, 1863; a member of the American Medical Association, president of the Sandusky County Medical Society and vice-president of the Northwestern Ohio Medical Society, the pioneer practitioner of Sandusky County, died at his home in Fremont, Ohio, February 4, aged 68.

John W. Baker, M.D. Medical College of Ohio, Cincinnati, 1883; a member of the American Medical Association, Illinois State Medical Society, Clark County Medical Society, and the Æsculapian Society of the Wabash Valley, died at his home in West York, Ill., January 29, from cerebral hemorrhage, after a short illness, aged 54.

Daniel W. White, M.D. Louisville Medical College, 1878; a member of the American Medical Association, Medical Society of the State of California and San Bernardino County Medical Society, died at his home in Base Line, San Bernardino, Cal., January 23, after an illness of several years, from tuberculosis, aged 51.

James Widner, M.D. Medical Department of the University of Iowa at Keokuk, 1864; a surgeon in the Federal service during the Civil War; for twelve years county clerk of Adams County, Iowa, died at his home in Corning, Iowa, January 26, from senile debility, aged 80.

George Archie Stockwell, M.D. Albany (N. Y.) Medical College, 1866; formerly editor of the *Medical Age* and the *Detroit Medical Journal*, and later editor of *Forest and Stream*, died at Houston, Texas, January 28, from cerebral hemorrhage, after a short illness, aged 59.

William M. Hand, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1888, died at his home in Woodstock, New Brunswick, February 10, from streptococcus infection contracted while operating on a patient for puerperal sepsis, aged 42.

De Haven Sharp, M.D. University of Georgetown Medical Department, Washington, D. C., 1904, a member of the medical staff of the Washington Asylum Hospital, died from septicemia at that institution, February 3, after an illness of one month, aged 27.

Lorenzo S. Bartholomew, M.D. University of Buffalo (N. Y.) Medical Department, 1884, of Reading Centre, N. Y., died at the Buffalo Hospital, January 31, from disease of the spine, for which an operation was performed a few days before, aged 49.

Isaac Warren Sawin, M.D. Cleveland University of Medicine and Surgery, 1857, assistant surgeon in the Rhode Island militia during the Civil War, died at his home in Providence, R. I., February 1, after an illness of three weeks, aged 82.

George A. Gordon, M.D. Homeopathic Hospital College, Cleveland, 1870, of Chillicothe, Mo., died at the Women's and Children's Hospital, Kansas City, Mo., January 31, a few hours after an operation for a tumor of the abdomen.

William McKinsey, M.D. Curtis Physio-Medical Institute, Marion, Ind., 1889, a veteran of the Civil War, died at his home in Marion, Ind., January 28, from cerebral hemorrhage, after an illness of two weeks, aged 63.

James B. Littlewood, M.D. University of Georgetown Medical Department, Washington, D. C., 1868, chief of the division of chemistry in the Patent Office, died at his home in Washington, February 7, from heart disease.

Howard Halsey Young, M.D. Bellevue Hospital Medical College, New York City, 1884, died at his home in Riverhead, N. Y., January 17, after an illness of about three weeks, from nervous exhaustion, aged 44.

Joseph G. Grosscup, M.D. Hahnemann Medical College, Philadelphia, 1873, of Reading, Pa., died from cerebral hemorrhage, January 31, in St. Joseph's Hospital, Reading, after an illness of eight years, aged 58.

Reuben F. Parkhill, M.D. Albany (N. Y.) Medical College, 1870, one of the coroners of Steuben County, N. Y., died at his home in Howard, N. Y., January 26, from heart disease, after a long illness, aged 73.

John H. W. Mask, M.D. Leonard Medical School, Raleigh, N. C., 1898, a highly respected colored physician of Wilmington, N. C., died at his home in that city, February 4, after a long illness, aged 32.

Francis A. Payan, M.D. Dartmouth Medical School, Hanover, N. H., 1884, died at his home in Woonsocket, Providence, R. I., January 30, from influenza, after an illness of two weeks, aged 52.

James G. Robison, M.D. Bellevue Hospital Medical College, New York City, 1884, died at his home in Rogers, Ark., from bronchial pneumonia, January 25, after an illness of three weeks, aged 46.

Edwin F. Yohn, M.D. University of Louisville Medical Department, 1895, died at his home in Valparaiso, Ind., from septicemia contracted from a patient, after an illness of three days, aged 42.

John P. Devereux, M.D. Department of Medicine of the University of Pennsylvania, 1896, of Philadelphia, died in the Polyclinic Hospital in that city from tuberculosis, February 9, aged 35.

Isaac Jackson, M.D. Jefferson Medical College, Philadelphia, 1847, for more than sixty years a practitioner of Brownsville, Pa., died at the home of his daughter in Pittsburg, February 6.

Charles H. Pierson, M.D. Pennsylvania Medical University, Philadelphia, 1876, died at his home in Avon, Ill., January 25, from pneumonia, after a short illness, aged more than 80.

Fred H. Hunter, M.D. Philadelphia College of Medicine and Surgery, 1869, died at his home in Emmettsburg, Iowa, January 24, from heart disease, after a short illness, aged 57.

Francis Hamilton Hill, M.D. Medical Department of Columbian University, Washington, D. C., 1849, died at his home in Washington, January 30, after an illness of three weeks, aged 80.

Joel K. Van Kirk, M.D. Jefferson Medical College, Philadelphia, 1854, of Elizabeth, Pa., formerly a school director of that place, died at his winter home in Eustis, Fla., February 3, aged 80.

George A. Tower, M.D. Boston University School of Medicine, 1877, of Watertown, Mass., died suddenly in Cambridge, Mass., from cerebral hemorrhage, February 3, aged 60.

W. H. Miller, M.D. College of Physicians and Surgeons, Chicago, 1893, died at his home in Chadwick, Ill., January 31, from pneumonia, after an illness of one week, aged 45.

Isaac S. Meeks, M.D. Medical College of Ohio, Cincinnati, 1850, one of the oldest residents of Troy, Ohio, died at his home in that city, January 31, from senile debility.

Caroline A. Risdon, M.D. Hahnemann Medical College and Hospital, Chicago, 1884, died at the home of her daughter in Oakland, Cal., February 1, from pneumonia, aged 68.

Benjamin A. Allison, M.D. Jefferson Medical College, Philadelphia, 1844, died at his home in Decatur, Ill., from paralysis, February 6, after an illness of four months, aged 89.

John H. Fulbright, M.D. Louisville (Ky.) Medical College, 1880, of Springfield, Mo., died in Los Angeles, Cal., from tuberculosis, after an illness of several months, aged 48.

Edward C. Jungbluth, M.D. Omaha (Neb.) Medical College, 1903, coroner of Colfax County, Neb., was killed in a runaway accident near Leigh, Neb., February 9, aged 27.

Harry Stites, M.D. Medical Department of the University of Pennsylvania, Philadelphia, 1876, of Harrisburg, died in Havana, Cuba, January 25, after a short illness.

Edward S. Dalrymple, M.D. New York University, New York City, 1885, died suddenly at his home in Branchville, N. J., February 3, from heart disease, aged 43.

Hiram A. Reid, M.D. Iowa Medical College, Des Moines, 1883, died at his home in Pasadena, Cal., January 28, from pneumonia, after an illness of one week, aged 71.

Elmer Fuller, M.D. Rush Medical College, Chicago, 1902, died at his home in Adrian, Mich., from influenza, January 25, after an illness of about one month, aged 43.

Walter Wells, M. D. University of Louisville Medical Department, 1905, died at his home in Willisburg, Ky., from typhoid fever, February 5, after a long illness.

Donn V. Herren, M.D. Missouri Medical College, St. Louis, 1887, of Blockton, Iowa, died at Corning, Cal., February 1, from cerebral hemorrhage, aged 46.

E. H. Pocock, M.D. Starling Medical College, Columbus, Ohio, formerly of Marshall County, Ind., died in Oklahoma City, Okla., January 10, aged 73.

Daniel L. Robey, M.D. (Years of Practice, Illinois, 1878), died at his home in Stewardson, Shelby County, Ill., January 20, from senile debility, aged 77.

George W. T. Hannah, M.D. Vanderbilt University Medical Department, Nashville, Tenn., 1876, died suddenly at his home in Thomaston, Ga., February 1.

Robert S. Engler, M.D. Medico-Chirurgical College of Philadelphia, 1901, died at his home in Philadelphia, February 6, from typhoid fever, aged 31.

George W. Carpenter, M.D. Eclectic Medical College of the City of New York, 1887, of Minneapolis, died at St. Paul, January 28.

D. Dalton Jacobs, M.D. New York University, New York City, 1871, died at his home in Willimantic, Conn., January 31 aged 66.

Vincent Zolnowski, M.D. New York University, New York City, 1891, died at his home in New York City, January 21.

S. T. Brothers, M.D., twice a member of the Iowa legislature, died at his home in Malvern, Iowa, January 27, aged 79.

The Heart in Neurasthenia.—Dercum says that in neurasthenia the disturbances of the circulatory apparatus consist in modification of the force and rhythm of the heart's action and in the character and frequency of the pulse; more or less marked alterations of vasomotor tonus; and perhaps the most striking, if not the most common symptom of circulatory disturbances is palpitation of the heart.

Miscellany

A Problem in Practical Ethics.—The local profession of probably every city in the United States, says *American Medicine*, faces a problem in practical ethics, and in the larger cities this problem is multiplied a number of times. For example: Before his sins—at least before his fellow practitioners have "found him out"—a man gets into the local medical societies and establishes a fair reputation and practice. Soon are told stories, both by patients and physicians, and dark hints, or sorry evidences of trickery appear about the man. It is found that he is playing all sorts of fraudulent games with his patients to make money; he demands visits not medically required so long as the patience of the patient and his pocketbook will endure it. He smuggles in an unnecessary operation or two. If the bill is not paid there is a legal suit or a threat of it, until the poor dupe settles as best he or she may, usually paying in full to avoid trouble and to be done with the sharper. Expensive medicines of a peculiar character, or even instruments have, perhaps, also been ordered. There has been little or no cure of the disease and, when possible, there has been only an imagined, or encouraged, sometimes even a diabolically created disease present. The scamp intimidates his patients, gets new ones, heaven knows how, and while growing from bad to worse, covers up his deviltries so dextrously that legal proof of unprofessionalism can not be got. His ways become known to censors and colleagues; each shrinks from the danger and odium of exposing him, and so the infamy goes on. The local and the general professional reputation suffers, and the good name of medicine is degraded, while disgusted patients go over to quackery, saying, "These doctors must be much alike, or they'd run such fellows out of their medical societies, or 'show them up' in some way."

Postgraduate Work at Glasgow Royal Infirmary.—The provision for postgraduate clinical teaching his hitherto been very unsatisfactory in Glasgow, says the *British Medical Journal*. That there is a distinct demand for such tuition has been amply demonstrated by the success which has attended numerous courses on ophthalmology during the past few years. These courses are held during the winter months. A further attempt to organize postgraduate courses on a large scale has been decided on by the staff of the Royal Infirmary. With the approval of the managers, the following scheme has been adopted: There will be three courses of instruction in the year; one in winter during February and March; the second in spring in May, and the third in autumn during October and November. The winter course will include special instruction in the following subjects: Diseases of the ear, diseases of the nose and throat; diseases of the skin; diseases of the bladder and kidneys; diseases of women; clinical medicine; clinical surgery; surgical technic; surgical bacteriology; electrotherapeutics and bacteriology. The spring and autumn courses will be on similar lines, and from time to time such other subjects will be introduced as may be found desirable. It is intended to make the teaching as far as possible practical and clinical. There is no doubt that the Royal Infirmary will be an excellent field for postgraduate work. There will be ample clinical material at the disposal of the staff, as, in addition to a very large outdoor department, 600 resident patients are available.

Success and Failure.—Each year hundreds of young men receive their diplomas and are supposed to be ready to attend to the ailments that afflict poor suffering humanity. The *Medico-Chirurgical Journal* says that each of these young men should ask himself what he is going to do with his life. "There are many doctors, who have achieved a high reputation in their profession, who have still made a failure of their lives. Their aims have been low. They have not had a high ideal of their profession, and as a consequence they have missed the better part of life. Mere skill in diagnosis or with the knife does not mean success in the highest sense. It is in the moral sphere that the doctor, like every other man, gains his greatest success. It is the duty of every man to make the the best of what is in him. Unless he works, from a sense of duty, in this direction his successes will be merely of a tem-

poral nature. He may make a discovery or two in the practice of medicine which are of use to mankind, but he will have left no lasting impression on the world. In fact, the world would have been as well off if he had never lived, for some other man would soon have made the same little technical discovery."

Chloroform Death Without Chloroform.—Professor Raymond of Paris relates in the *Progrès Médical* for January 13 that when he was a student his professor was lecturing one day on the danger of death from chloroform and how to avoid it, talking over a patient who evidently understood little of the lecture except the words danger and death. When Raymond approached to begin to administer the chloroform the patient passed into syncope before a whiff of chloroform had been given, and it was a long time before he could be resuscitated. In a recent suit for damages for a death during chloroform administration, it was proved that the patient had been much afraid of the anesthetic and had said to one of the assistants: "You will come to my funeral, won't you?" Raymond concludes that death may occur from sheer dread of the chloroform, and that the witnesses of such an accident are not responsible for the fatality.

State Boards of Registration

COMING EXAMINATIONS.

MAINE State Board of Registration of Medicine, City Building, Portland, March 13. Secretary, Wm. J. Maybury, Saco.

CONNECTICUT Medical Examining Board, City Hall, New Haven, March 13-14. Secretary, Charles A. Tuttle, New Haven.

MASSACHUSETTS Board of Registration in Medicine, State House, Boston, March 13-14. Secretary, Edwin B. Harvey, Boston.

Kansas October Report.—Dr. T. E. Raines, secretary of the Kansas State Board of Registration and Examination, reports the written examination held at Topeka, Oct. 10-12, 1905. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 28, of whom 21 passed and 7 failed. The following colleges were represented:

College.	Year Grad.	Per Cent.
PASSED.		
University of Nashville	(1905)	85
Northwestern University	(1905)	84
Missouri Med. Coll.	(1890)	77
University of St. Louis	(1905)	80
University Med. Coll., Kansas City	(1902)	88
Keokuk Med. Coll.	(1905)	75, 76
Tennessee Med. Coll.	(1899)	77
Denver and Gross Med. Coll.	(1905)	88
Hahnemann Med. Coll., Kansas City	(1905)	75
Central Med. Coll.	(1905)	84
Illinois Med. Coll.	(1905)	85
Meharry Med. Coll.	(1904) 76; (1905)	89
Barnes Med. Coll.	(1903)	81
Denver Homeo. Med. Coll.	(1902)	82
Hospital Coll. of Med., Louisville	(1905)	82
Kentucky School of Med.	(1902)	75
American Med. Coll., Chicago	(1905)	85
Laval University, Quebec	(1904)	78
University of Colorado	(1904)	85
FAILED.		
Hahnemann Med. Coll., Chicago	(1885)	70
Meharry Med. Coll.	(1902)	60
Central Med. Coll.	(1905)	65
Ensworth Med. Coll.	(1905)	65
College of P. and S., Boston	(1904)	65
Starling Med. Coll.	(1881)	58
Keokuk Med. Coll.	(1897)	68

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending Feb. 10, 1906:

Wilson, William H., asst.-surgeon, ordered to proceed from New York City, to Schuylkill Arsenal, Pa., on official business.

Fauntleroy, P. C., asst.-surgeon, ordered to proceed from Fort Porter, N. Y., to New York City, and report for duty as surgeon on the transport *Sumner* during its voyage to the West Indies, and on return of transport to New York City, will rejoin proper station.

Scott, Geo. H., asst.-surgeon, leave of absence extended 20 days.

Hoff, John Van R., asst.-surgeon general, relieved from duty in the office of the chief of staff, to take effect Feb. 15, 1906.

Morse, Arthur W., asst.-surgeon, Baker, Frank C., asst-surgeon, Kiersted, Henry S., asst.-surgeon, advanced from the grade of first lieutenant to that of captain, to date from Feb. 4, 1906.

The following named officers of the Medical Department, having reported their arrival at San Francisco, Cal., in compliance with orders heretofore issued, are assigned to duty and stations as follows:

Corbusier, Wm. H., deputy surgeon-general, will proceed to Vancouver Barracks, Washington, for duty as chief surgeon, Department of the Columbia.

Bloombergh, H. D., asst.-surgeon, will proceed to Fort Leavenworth, Kans.

Purnell, Harry S., asst.-surgeon, will proceed to Fort Mackenzie, Wyoming.

Morris, Samuel J., asst.-surgeon, will proceed to Fort Schuyler, New York.

Le Wald, Leon T., asst.-surgeon, will proceed to Fort Slocum, New York.

Sweazey, Verge E., asst.-surgeon, will proceed to Washington Barracks, D. C., and report to the commanding officer of the General Hospital at that post, for observation and treatment.

McCaw, W. D., surgeon, left Washington, D. C., on 16 days' leave of absence.

Snaddy, Cary A., asst.-surgeon, ordered to report in person to the commanding officer, Fort Barrancas, Fla., for duty.

Smith, L. L., asst.-surgeon, assigned to duty in the Army Transport Service, and will report to the superintendent of that service at San Francisco, Cal., for duty.

Corbusier, W. H., deputy surgeon-general, granted three months' leave of absence.

Hoff, John Van R., asst.-surgeon general, granted fourteen days leave of absence.

Reynolds, F. P., surgeon, leave of absence extended fourteen days.

Purnell, Harry S., asst. surgeon, granted twenty-one days' leave of absence.

Hathaway, L. M., asst.-surgeon, ordered to Jeffersonville, Ind., to examine male clerks and stenographers at quartermaster's depot, to determine whether they are mentally and physically qualified for service in the Philippine Islands.

Le Wald, Leon T., asst.-surgeon, granted seven days' leave of absence.

Brechemin, Louis, deputy surgeon-general, granted leave of absence for one month, on account of sickness.

Murtagh, John A., asst.-surgeon, in addition to present duties, will take charge of the medical supply depot, San Francisco, Cal., during the absence of Lieut-Col. Brechemin, deputy surgeon general.

Mason, George L., dental surgeon, left Fort Moultrie, S. C., and arrived at Fort Oglethorpe, Ga., for duty.

Carpenter, Alden, dental surgeon, returned to Vancouver Barracks, Washington, from leave of absence.

White, J. Samuel, contract surgeon, left New York on transport *Kilpatrick* for Philippine service.

Carson, Samuel K., contract surgeon, left New York on transport *McClellan* for Philippine service.

Newlove, George, contract surgeon, left New York as transport surgeon of the *McClellan*, en route to Philippine service.

Long, Stephen M., contract surgeon, when relieved at Fort Duchesne, Utah, ordered to San Francisco, Cal., for Philippine service.

Leeper, John F., contract surgeon, relieved from further duty in the Philippines Division, and ordered at the expiration of his present leave of absence, to duty at Fort Duchesne, Utah.

Hereford, John R., contract surgeon, arrived at Fort Moultrie, S. C., for duty.

Tukey, William H., contract surgeon, left Boise Barracks, Idaho, on leave of absence for two months.

Stuckey, Harrison W., contract surgeon, arrived at Fort Assiniboine, Mont., for temporary duty.

Sievers, Robert E., contract surgeon, returned to duty at Fort Missoula, Montana, from leave of absence.

Dillon, G. Parker, contract surgeon, left Army General Hospital, Presidio of San Francisco, Cal., for treatment at Hot Springs, Ark.

Hall, Henry M., contract surgeon, arrived home, Cedartown, Ga., for two months' leave of absence.

Waddell, Ralph W., dental surgeon, left Fort Leavenworth, Kans., en route to San Francisco, Cal., for Philippine service.

Navy Changes.

Changes in the Medical Corps U. S. Navy for the week ending Feb. 10, 1906:

Bertolette, D. N., medical director, commissioned medical director, with rank of captain, from April 5, 1905.

Beyer, H. G., medical inspector, commissioned medical inspector with rank of commander, from April 5, 1905.

Gardiner, J. E., medical inspector, commissioned medical inspector with rank of commander, from Dec. 17, 1905.

De Valin, C. M., Thompson, J. C., and Benton, F. L., surgeons, commissioned surgeons, with rank of lieutenant-commanders, from March 3, 1903.

Garton, W. M., surgeon, commissioned surgeon, with rank of lieutenant-commander, from March 12, 1903.

McCullough, F. E., surgeon, commissioned surgeon, with rank of lieutenant commander, from June 9, 1903.

Furlong, F. M., surgeon, commissioned surgeon with rank of lieutenant commander, from June 20, 1903.

Guthrie, J. A., surgeon, commissioned surgeon, with rank of lieutenant commander, from December 15, 1904.

Orvis, R. T., surgeon, commissioned surgeon, with rank of lieutenant commander, from March 1, 1905.

Kerr, D. B., surgeon, commissioned surgeon, with rank of lieutenant commander, from April 5, 1905.

Angeny, G. L., surgeon, commissioned surgeon, with rank of lieutenant commander, from April 24, 1905.

Hoyt, R. E., P. A. surgeon, commissioned P. A. surgeon, with rank of lieutenant, from May 8, 1905.

Rennie, W. H., asst.-surgeon, detached from the Naval Station, Cavite, P. I., and ordered to the *El Cano*.

Dykes, J. R., asst.-surgeon, detached from the *Baltimore* and ordered to the *Oregon*.

DeBruler, J. P., asst.-surgeon, detached from the *El Cano* and ordered to the *Oregon*.

Dean, F. W. S., asst.-surgeon, detached from the *Frolic* and ordered to the *Oregon*.
Grieve, C. C., asst.-surgeon, detached from the *Oregon* and ordered to the *Frolic*.
Steele, J. M., medical inspector, commissioned medical inspector, with rank of commander, from Dec. 16, 1905.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending February 7, 1906:

Kalloch, P. C., surgeon, to proceed to Boston and New Bedford, Mass., on special temporary duty, on completion thereof to rejoin station at Portland, Me.
Nydegger, J. A., P. A. surgeon, granted seven days' leave of absence from February 6, under Paragraph 191 of the Regulations.
Grubbs, S. B., P. A. surgeon, bureau letter granting him twenty-one days' leave from February 2, amended to read twenty-one days from February 7.
Holt, J. M., P. A. surgeon, leave of absence granted for two months, from January 15, on account of sickness, amended so as to be effective from January 23.
Wightman, W. M., asst.-surgeon, granted seven days' leave of absence from January 26, under Paragraph 191 of the Regulations.
Monoure, J. A., acting asst.-surgeon, granted leave of absence for thirty days, from February 15.
Walkley, W. S., acting asst.-surgeon, granted twenty-five days' leave of absence from February 6.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended February 9, 1906:

SMALLPOX—UNITED STATES.

California: San Francisco, Jan. 20-27, 8 cases.
Florida: Barberville, Jan. 27-Feb. 3, 4 cases; Lakeland, 3 cases; St. Petersburg, 3 cases; Seffner, 1 case.
Georgia: Augusta, Jan. 22-29, 1 case.
Kansas: In 23 counties, Dec. 1-31, 145 cases.
Kentucky: Covington, Jan. 27-Feb. 3, 1 case.
Louisiana: New Orleans, Jan. 27-Feb. 3, 9 cases.
Michigan: Ann Arbor, Jan. 27-Feb. 3, 1 case; Detroit, 1 case.
Missouri: St. Louis, Jan. 27-Feb. 3, 1 case.
Nebraska: South Omaha, Jan. 27-Feb. 3, 1 case.
Ohio: Cincinnati, Jan. 26-Feb. 2, 5 cases.
Pennsylvania: Altoona, Jan. 27-Feb. 3, 1 case (imported); Lancaster, Dec. 30-Jan. 6, 1 case.
Utah: In 8 counties, Dec. 1-31, 111 cases.
Virginia: Norfolk, Feb. 2, 10 cases (at Crane Island Hospital, 138 cases.)
Wisconsin: Appleton, Jan. 27-Feb. 3, 7 cases.

SMALLPOX—FOREIGN.

Africa: Cape Town, Dec. 9-16, 1 case.
Argentina: Buenos Ayres, Nov. 1-30, 41 deaths.
Brazil: Pernambuco, Dec. 1-13, 42 deaths; Rio de Janeiro, Dec. 24-Jan. 7, 3 cases, 3 deaths.
Canada: New Brunswick: Kings County, Jan. 29, present; Queen's County, present; Sunbury County, present; Toronto, Jan. 13-27, 3 cases.
Chile: Antofagasta, Jan. 4, 26 cases, 12 deaths; Iquique, Dec. 24-31, 20 cases, 6 deaths.
China: Hong Kong, Dec. 16-29, 3 cases, 3 deaths; Shanghai, Dec. 27, present.
Ecuador: Guayaquil, Dec. 31-Jan. 14, 9 deaths.
Great Britain: Bristol, Jan. 13-20, 1 case, 1 death; Liverpool, 2 cases (imported).
India: Bombay, Jan. 2-9, 6 deaths; Calcutta, Dec. 16-30, 55 deaths; Madras, Dec. 16-Jan. 5, 36 deaths; Rangoon, Dec. 16-30, 17 deaths.
Italy: General, Jan. 11-18, 10 cases.
Mexico: Tuxpam, Jan. 23-30, 3 deaths (55 cases and 12 deaths in suburbs to date).
Russia: Moscow, Dec. 31-Jan. 6, 10 cases, 1 death: Odessa, Jan. 6-13, 11 cases, 4 deaths.
Spain: Barcelona, Jan. 10-20, 6 deaths.

YELLOW FEVER—FOREIGN.

Brazil: Rio de Janeiro, Dec. 24-Jan. 7, 6 cases, 2 deaths.
Cuba: Habana, Feb. 2, 1 case; Matanzas Province, Feb. 5, 1 case, 1 death.
Ecuador: Guayaquil, Dec. 31-Jan. 14, 13 deaths.
Mexico: Vera Cruz, Jan. 13-20, 2 cases, 1 death.

CHOLERA—INSULAR.

Philippine Islands: Manila, Dec. 9-23, 3 cases, 3 deaths; Bulacan Province, Jan. 4, present.

CHOLERA—FOREIGN.

India: Calcutta, Dec. 16-30, 129 deaths; Madras, Dec. 16-Jan. 5, 13 deaths; Rangoon, Dec. 23-30, 16 deaths.

PLAGUE—INSULAR.

Philippine Islands: Manila, Dec. 16-23, 1 case, 1 death.

PLAGUE—FOREIGN.

Brazil: Rio de Janeiro, Dec. 23-Jan. 7, 18 cases, 4 deaths.
Chile: Antofagasta, Dec. 20-27, 3 cases.
China: Hong Kong, Dec. 16-23, 3 cases, 3 deaths.
India: Bombay, Jan. 2-9, 17 deaths; Calcutta, Dec. 16-30, 33 deaths; Madras, Dec. 16-Jan. 5, 6 deaths; Rangoon, Dec. 16-30, 30 deaths.
Japan: Formosa, Nov. 24-Dec. 31, 15 cases, 14 deaths.
Peru: Callao, Dec. 21-Jan. 11, 1 case, 1 death; Chiclayo, Jan. 6, present; Lima, Dec. 21-Jan. 11, 10 cases, 5 deaths; Nueva,, Dec. 21-Jan. 11, 1 death; Salaverry, Jan. 6, present; San Pedro, Dec. 21-Jan. 11, 2 cases, 1 death; Truji llo, Dec. 21-Jan. 11, 17 cases, 1 death.

Medical Organization

What Can the County Society Do?

XI. MEDICAL EDUCATION.

Such a topic at first sight appears foreign to the purview of a county medical society, but such is far from being the case. It is generally admitted that there are too many medical colleges, too many medical students, and especially too many physicians whose educational attainments add no luster to the profession of medicine. In great part the remedy for these evils that are so loudly decried by the average medical man is in the hands of the organized profession. Through the Council on Medical Education the American Medical Association is endeavoring by pressure at the top to force all the medical schools to do every part of their duty at a high plane.

While this good work is progressing, the members of county societies have much they can do. In states that have high entrance requirements to medical schools the societies can see to it that they are maintained and enforced. When, as in most states, this stage in evolution has not yet been reached, the societies should work hard to have such a law enacted. After all, few men decide to study medicine who do not consult one or more physicians. In the past it has been the custom of the average doctor to feel flattered that someone else wants to be a doctor, and very often a man ill equipped for medicine has been encouraged into it, only later to fall in defeat before the hard conditions, or else to remain in the guild while lowering its average of ability. That just this phase of the subject is a proper subject for medical society discussion and action is shown by the experience of one county medical society in Ohio—Shelby. For some 25 to 30 years no young man from that county has studied medicine without his qualifications being considered by the society. The result has been few students for the schools, but those few have good educations and have given evidence of possessing some at least of the necessary qualifications. In one generation in a county with no large cities this method of supervision will work a revolution in the character and standing of the profession. As with so many other ill conditions of medical life, a powerful remedy is right within the grasp of the local organized profession—the county medical society.

Material Benefits from Work in County Society.

If the energy that is being wasted by physicians in attacking, belittling, slandering and fighting one another were devoted to work, and association in work, we should have a vastly better educated profession, and the public would receive its medical attention from gentlemen very much better qualified to give it. And they would all be better off, financially. Where one finds a small city or town in which the medical men are devoting their superfluous energies to belittling each other, there, as a rule, one finds a community with medical men below the average in ability and in financial standing; patients are being referred to some surgeon or specialist in the nearest large city, instead of being attended by some local man who is quite as good as the city specialist, or might be if he would devote his energies to his own betterment and work in harmony with his fellows.

On the other hand, where we see a similar town in which is a good, active medical society, with all the physicians in the vicinity members of it, where the men are working in harmony, where they are helping each other, where they feel that they may safely leave home from time to time and do systematic postgraduate work, there we find that patients are being referred to local physicians; that different men are taking up different lines of work and are being aided and helped by their fellow physicians. Unfortunately there are too few communi-

ties that have the benefit of a medical profession of this sort; but they do exist, and a few may be found in almost every state in the country. Why are there not more?

Association in Work.

The salutary influence of the county medical society can not be overestimated. It is here that association which is lacking in the ordinary course of the day's work may be enjoyed, and acquaintance with the other physicians of the vicinity which is so vital to an honest understanding of one another and to friendly relations may be made. The broadening influence of association, with the exchange of ideas and experiences that follows, is the most potent factor in the progress of medicine. To each we may give a little; from each we may learn something. Probably one of the truest words ever spoken was Osler's axiom, "The master word in medicine is work." Without work there is no advancement in educational equipment, in professional ability. Without work, constant, steady, never-ending work, we stagnate or drop back; and not only are we distanced in the race, but the community—or so much of it as comes under our professional care—suffers; we can not give that grade of professional service which we should give; we become ignorant.

Just as work is essential to progress, so association is essential to work. Few men have the courage or the ability to work and study by themselves and without the stimulus of association with others similarly engaged. We do not appreciate our own limitations, our own ignorance, actual or relative, until we come into contact with others better educated or better qualified than we are. It should be considered his first and most important duty, by ever physician who would deal honestly with himself and with his patients, to attend his county society and to work with his fellow-physicians for the betterment and improvement of all. The plan of making each county society a practical postgraduate medical school, as advocated by the Committee on Organization and so ably preached all over this country by Dr. McCormack, is a most valuable suggestion. It embodies the two things absolutely essential to progressive medical education and individual improvement, association and work.

Association Achievements Remarkable.

Dr. D. L. Wilkinson, Montevallo, Ala., writes: "I was a delegate at the Atlantic City session at which were passed the resolutions of reorganization. I was apprehensive. It is with extreme gratification that I now wish to say that I believe we have the best organization in the world. It has already achieved marvelous results and its possibilities are limitless. What it is accomplishing for the physician in a business way, what it is doing through its Committee on Legislation, what it is doing and has done through its Council on Pharmacy and Chemistry, what it is doing to lessen preventible diseases and to protect the public, certainly entitle it to the everlasting gratitude and the unfailing support of every regular physician throughout the length and breadth of these United States."

Society Proceedings

CHICAGO UROLOGICAL AND CHICAGO MEDICAL SOCIETIES.

Joint Meeting, held Jan. 24, 1906.

DR. WILLIAM L. BAUM, President of the Chicago Urological Society, in the Chair.

Syphilis of the Male Genitourinary Tract.

DR. HENRY G. ANTHONY referred to the discovery of the *Spirochæta pallida* as the probable cause of syphilis, and said that syphilis is a great imitator of other diseases. As to chancre, physicians are too prone to depend exclusively on the presence of induration in the diagnosis of chancre. They do not consider other points sufficiently, such as outline, color, smoothness of the base, varnished appearance, etc. For years it has been recognized that it is at times impossible to differentiate between chancre and chancroid. In Paris doubtful cases are admitted to the hospital and secretion taken from the sore is inoculated into the arm of the patient and covered with a watch crystal. If the ulcer is a chancroid, a pustule will form in twenty-four or forty-eight hours, and microscopic examination will reveal the presence of the Ducrey bacillus. This, he thinks, is a dangerous method and should only be employed on patients confined in hospitals. The base of the pustule should be cauterized immediately.

The diagnosis of a chancre from epithelioma of the penis is at times difficult. Cases have been observed of patients with lesions of the penis which have been diagnosed epithelioma. The penis was amputated, and shortly afterward the secondary eruption appeared. The sudden appearance and rapid development of the lesion should protect the surgeon from this serious blunder. One of the chief difficulties of diagnosis is the fact that epithelioma of the penis is apt to develop in those who have a syphilitic history. In all cases he advises that tissue be excised and examined microscopically before the penis is amputated.

When lichen planus occurs on the integument of the genitals it is apt to assume a circinate form, when it is almost certain to be mistaken for syphilis by the general practitioner.

Syphilis of the testicle in infancy frequently terminates in atrophy. There are two forms of syphilis of the testicle in adult life—sclerosis and gumma. Sclerosis is a hyperplasia of connective tissue which may affect one or both testicles. The organs enlarge to two or three times their normal size; they are very firm and hard; they annoy the patient through their size and weight. Under treatment they subside, but frequently a recurrence takes place if the treatment is discontinued, and after several attacks the condition becomes permanent.

In gumma of the testicle, one or both organs may be affected, and there may be present a single gumma or a number. Traumatism may be the exciting cause. In one of the author's cases the patient fell downstairs and struck his testicle against the newel post. As to syphilis of the epididymis, in the early months of infection six or eight nodules may develop suddenly in the globus major of each side. Later in the disease it may assume the form of a simple inflammation with deposits of plastic material, and disappear under treatment, leaving fibrous tissue.

Cases of gumma of the cord have been reported by Campbell, Goldenberg and others. In a case observed by Verneuil, the tumor was the size of two fists and was diagnosticated as carcinoma. Its specific nature was discovered on postmortem examination. Reclus reported a case in which the cord had attained the diameter of a lead pencil, and it was stiff and rigid like a glass rod. In most of the cases the lesion was an almond-sized tumor which had been mistaken for a cyst.

As to syphilis of the penis, a chancre of the meatus produces a ring of cartilaginous hardness surrounding the meatus, which, when seen before the tenth day, can only be detected by palpation. There is no change in the color of the mucous membrane; later the mucous membrane presents a whitish appearance. It is usually accompanied by a discharge from the urethra which contains the gonococcus. The author also discussed scleroderma of the meatus, papular syphilide of the meatus, gumma of the prepuce, cylindroid of the urethra (the rarest of all syphilitic lesions of the genitourinary organs), syphilis of the ureter, syphilis of the kidney, and syphilis hereditaria tarda.

Tuberculosis of the Male Genital Tract.

DR. ALEXANDER HUGH FERGUSON discussed tuberculosis of the male urethra, prostate gland, seminal vesicles, vasa deferentia, epididymes and testicles. He said that primary tubercular urethritis of penile and membranous urethra is very rare. It is almost invariably secondary, and is a part of urogenital tuberculosis, descending from the kidney, bladder, prostate, vesiculæ seminales, vas deferens, epididymis and testicles; more rarely affecting the areas of physiologic dilata-

tion, e. g., the prostatic, bulbous and navicular portions of the urethra where urine stagnates. The prostatic urethra is most frequently involved, but the lesions may occur along the entire urethra. Tuberculosis here, as elsewhere, may appear in the form of a miliary tuberculosis, diffuse or clustered; as indolent ulcers, or cheesy infiltrations. The surface often appears diphtheritic. According to Senn primary tuberculosis of the urethra is exceedingly rare, and when it does occur it takes place in a part of the urethral mucous membrane prepared for the reception and growth of the bacillus by some antecedent injury or disease. Secondary tubercular lesions of the male urethra comprise 1 per cent. of all forms of tuberculosis and 17 per cent. of all cases of urogenital tuberculosis. Young male adults, subject to or affected with tuberculosis, are prone to tubercular urethritis. Baumgarten's experiments on rabbits are rather convincing that primary urethritis, tubercular in character, may occur by inoculation. In either primary or secondary urethritis of this nature the diagnosis is not scientifically complete without demonstrating the presence of the bacillus of tuberculosis.

In over 100 cases of prostatectomy Ferguson has observed tubercular foci in five cases where tuberculosis was not diagnosed before operation, and only suspected in the last two, owing to their clinical history. The prognosis of the prostatic cases that are obviously tubercular, whether unilateral or bilateral, acute or chronic, primary or secondary, is very grave. The course may be very slow, and it usually is, but the termination is often fatal. The treatment should be constitutional mostly. He performed a prostatectomy on three patients suffering from tuberculosis of the prostate, in what he judged to be an early stage of the disease. Two died of general tuberculosis within a year; the other lived a year and a half, then died of bilateral kidney tuberculosis. A perineal fistula persisted in one case. Ferguson stated that when an abscess forms in the prostate it should be opened in the direction it is pointing, either via the rectum or perineum.

Tuberculosis of the Male Urinary Tract.

DR. ARTHUR DEAN BEVAN said there are three common foci of so-called primary tuberculosis of the genitourinary organs. The term primary must be qualified, although the possibility of a true primary tuberculosis of these organs must be admitted in the sense that the bacilli may gain entrance into the circulation without having lodged at a point where the primary focus is developed and are carried to the kidney or to the epididymis. But such a true primary involvement is rare. In almost all cases of tuberculosis of the genitourinary organs a bronchial or tracheal gland, or some lung or bone tuberculosis is the primary focus. From this focus the tubercle bacilli enter the circulation and then lodge in the kidney, prostate, epididymis, etc. An ascending tuberculosis from the urethra is possible. Bevan thinks that the majority of writers still maintain the view that the epididymis is the common point of infection, but he thinks this view is erroneous. So far as the order of frequency is concerned, he thinks the kidney is the most common point of involvement, the epididymis second, and the prostate third.

The recent work of Semon, Kronlein, Mayo, and the speaker's own has shown that tuberculosis of the kidney, in more than 90 per cent. of the cases, is unilateral, and if the diagnosis is made early, a nephrectomy will frequently clean up the entire picture. Kidney tuberculosis is not very commonly followed by genital tuberculosis. Genital tuberculosis leads to involvement of the vas deferens, the seminal vesicles, and the prostate and bladder. Tuberculosis of the kidney very often runs a silent course, without a symptom. He has operated on a patient with a distinct, definite history of lesion of the right kidney, who before the operation believed herself to be in very good general condition. Nephrotomy of the right kidney showed a large accumulation of pus. From the time the nephrotomy was made not a drop of urine passed through the bladder. There were no symptoms referable to the opposite side at any time, but within a week the patient died. Postmortem examination showed the opposite kidney, which had never given rise to any symptoms, to be a sausage-like structure composed of a dense fibrous capsule, filled with a caseating mass, without a vestige of kidney tissue.

Such a picture of silent tuberculosis occurs not infrequently. The ordinary symptoms are very similar to those found in several other conditions—stone, malignant tumor, polycystic degeneration of the kidney, pyelitis, and nephropyelitis from other germ infections. Blood is a common sign and symptom; also pus. The pain is of two kinds—colicky pain, which simulates closely that caused by kidney stone; rather chronic tenderness and uneasiness; temperature; prescence of a swelling. In the advanced cases, where there is present a tubercular pyonephrosis, or perinephritic process, there is no early evidence of swelling. In the advanced cases, again, there is a general picture of tuberculosis, with temperature. The presence of tubercle bacilli is discovered in about one-third of his cases. Where the presence of bacilli is not determined the symptoms frequently can not be differentiated from those of stone in the kidney. Here Bevan employs the *x*-ray. If the *x*-ray shows stone, well and good; if it does not, he believes he has to do either with tuberculosis or hypernephroma. If there is no swelling, no enlargement, but temperature, he says, tuberculosis. If there is enlargement and no temperature, with the absence of stone, absence of tubercle bacilli, he says, probable hypernephroma, so that the diagnosis is arrived at in a number of cases by exclusion. Where one kidney is involved and the other is healthy, a nephrectomy should be done, as nephrotomies and resections are not followed by satisfactory results.

DISCUSSION.

DR. F. KREISSL expressed himself a little more optimistically than Dr. Bevan relative to the treatment of tuberculosis of the bladder. In many cases he thinks the removal of the kidney, which is the primary focus, may effect a cure of the secondary lesion in the bladder without any other interference. In secondary lesions due to a descending infection he has noticed quite often that certain topical applications to the exulcerated bladder cause these ulcers to heal. He does not think that a primary lesion of the bladder, however, can be favorably influenced by the application of iodoform or bichlorid solution.

DR. GUSTAV KOLISCHER said that tuberculous cystitis may exist. Around the ureteral opening there may be a few disseminated ulcers, with undermined edges, and a few gray tuberculous nodules. In such cases favorable results are obtained if the kidney, which caused the descending tuberculosis, is removed. Rosen has recommended the injection of a 5 per cent. carbolic acid solution into such a bladder after the kidney is removed. In the case of a young girl on whom Kolischer did a nephrectomy, he found three ulcers. These healed inside of three days after the operation, but whether the healing of them was due to the injection of the carbolic acid or to the removal of the kidney, he does not know. He called attention to the fact that quite often the first symptom of kidney tuberculosis is frequency of urination. These patients, often without further examination, are treated by different methods, the urine not being examined. In young women, where the bladder is extremely tolerant, tuberculosis may exist for any length of time without causing serious symptoms.

DR. FERGUSON said that he has done nephrotomy in 12 cases, but had to remove the kidney later.

DR. BEVAN emphasized the point that tuberculosis of the kidney very frequently is primarily unilateral; and that the lesser operations of nephrotomy and resection can not be relied on; that the weight of evidence would seem to be in favor of a radical operation where an early diagnosis is made and the existence of another healthy kidney is determined.

WEST PHILADELPHIA BRANCH PHILADELPHIA COUNTY MEDICAL SOCIETY.

Regular Meeting, held Jan. 12, 1906.

Acute Tetanus with Recovery.

DR. GEORGE ALEXANDER KNOWLES reported the case of a boy 9 years of age, who received an incised wound of the left leg below the knee. The wound was cleansed and dressed with a bichlorid dressing and closed with four sutures. The edges did not unite and suppuration appeared. After several days the stitches were removed, the wound cleansed with bichlorid and peroxid and a 50 per cent. solution of carbolic acid in

glycerin was applied. Eight days after the accident the boy complained of painful swallowing, and the corners of his mouth became depressed. Bromid and chloral were immediately administered, but the symptoms increased, and in addition there was a slight twitching of the muscles and the jaw almost became locked. Tetanus antitoxin in doses of 30 c.c. was given hypodermatically twice daily for eleven days, in conjunction with bromids and chloral, and when the pulse was high and irregular, 5 gtts. of tincture of digitalis were given per rectum. On the thirteenth day, muscular rigidity having become constant, with convulsive seizures, opisthotonus and pleurothotonus, a lumbar puncture was made and 1 dram of antitoxin in 1 dram of normal salt solution was injected. The temperature rose to 104 3/5, but after about four days returned to normal. Food and brandy were given per rectum during the progress of the disease, and saline solution was administered in the same way in order to supply the system with water, as any attempt at giving water by the mouth produced convulsions. The pulse and respirations during the course of the disease were as high as 160 and 52 per minute respectively. On the fourteenth day the convulsions became less and finally ceased, although the muscular twitchings continued for several weeks after the patient was out of bed. They have now ceased entirely and the patient has made a good recovery.

DISCUSSION.

DR. W. S. NEWCOMET stated that at one time he felt that some of the deaths from tetanus were due to overdrugging, and he decided to make sure that this should not be the case with the next patient. The patient on whom treatment was undertaken with this theory in view seemed to be progressing very nicely for several days, and one morning on going to the ward before breakfast, Dr. Newcomet learned that the patient had not had a convulsion during the night, but on returning to the ward after breakfast, he was informed that the patient had suddenly had a convulsion and died.

DR. C. B. LONGENECKER said that a man who ran a splinter of wood into his hand was first seen in the early stages of tetanus, and was immediately sent to the hospital and large doses of tetanus antitoxin were administered. At the end of ten days the spasms ceased and he was thought to be on the road to speedy recovery, when shortly afterward he relasped into unconsciousness and died.

DR. KNOWLES stated that 720 c.c. of antitoxin were given to his patient and that the child had entirely recovered.

Modern Treatment of Wounds of the Anterior Segment of the Eye.

DR. JAMES F. PRENDERGAST stated that one of the important features was asepsis. Careful examination, with a good light, should be made and if there is redness present, the character and situation should be noted, as these are important diagnostic aids. Injuries of the lids are usually marked by free extravasation of blood, and cold compresses should be applied, if the case is seen early. If these do not accomplish the desired result, hot compresses, massage and sometimes a leech are of value. Lacerated wounds should be cleansed carefully and the edges brought together accurately to prevent deformity. Puncture wounds should be examined with great care to ascertain if there is any injury of the deeper structures, and if there is much reaction, septic washes should be applied. Burns, if external, should be treated the same as burns of any other part of the body, and if there are granulating surfaces, they should be protected with rubber or other tissue to prevent their growing together. Lacerations of the conjunctiva should be brought together with fine sutures, the edges carefully cleansed, foreign bodies picked out with sterilized instruments, and if the lacerations are painful, a drop of cocain solution may be instilled. In burns of the conjunctiva, especially time burns, he deems thorough flushing advisable. To alleviate pain, cocain solution and cold compresses were advised, and for the stimulation of healing hot compresses were recommended. Foreign bodies should be removed from the cornea and in many cases a drop or two of atropin is of value. Burns of the cornea should be treated by thorough cleansing of the eye and the application of cold compresses for a short time.

Syphilitic Complications of the Nose and Throat.

DR. A. B. KIRKPATRICK stated that it is very difficult to make a diagnosis of syphilis of the nose and throat in the primary and early secondary stages without inspecting other parts of the body. Suspicious cases should receive a careful examination of the tongue, hard and soft palate and throat. In the early cases there may be no history and no scars, and the vagaries of the specific infection are so irregular that even the most astute clinician may be mistaken. The secondary lesions of the throat occur most frequently in the following localities: tongue, lips, soft palate, gums and uvula. In the tertiary stage the diagnosis is more easily made, a symptom that is absolutely diagnostic being an erythematous eruption. In the treatment of syphilis he urged securing the confidence and co-operation of the patient and the necessity for continuing treatment for a sufficiently long period.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

Pneumonia.

In an article in the *St. Louis Medical Review*, L. Litchfield in speaking of the treatment of pneumonia, states that the patient should be supplied with plenty of fresh air without draughts. All unnecessary persons should be excluded from the sickroom. At the onset of the disease the digestive tract should be thoroughly cleansed by calomel or a saline purge, and water should be given freely and forced, if necessary, in the delirious patients, by high saline enemata and by hypodermoclysis. If the pain is very severe, codein or morphin combined with atropin may be used very sparingly hypodermically. If the blood pressure is high, with a hard, full, bounding pulse bleeding may be resorted to. In other instances, aconite or veratrum viride with active catharsis and icebags to the head and chest may accomplish the same effects. When the patient is delirious, in order to guard against any possible accident he should never be left alone. As regards the diet, Litchfield recommends that the nourishment be very sparingly given during the initial stage, and states that it should be simple and easily digested, as fermentation is liable to occur in the intestine, and thus produce a very serious complication. For the reduction of temperature he recommends sponge baths or packs. The heart must be carefully examined, and with an exaggerated second pulmonic sound strychnin should be administered, and if the pulse becomes irregular or intermittent digitalis should be used. Litchfield recommends alcohol in the form of whisky or brandy, both as a stimulant and as a food, taking the place of fats and carbohydrates. He prescribes it especially when the pulse reaches 120, and if the amount given should show its effect by being eliminated through the respiratory tract, he recommends that it be diminished. If a collapse is threatened, with accompanying cyanosis, a hot mustard bath or hot pack should be employed, with the free use of stimulants hypodermically. Hot baths and packs are used also when extreme nervousness is present. After the crisis has taken place, or in cases of delayed resolution, he increases the diet by giving eggs, chops and steaks, which may be continued steadily unless there is an evidence of the recurrence of temperature.

Mumps.

Mumps, as a rule, require but little treatment, especially in children. In grown individuals, however, considerable discomfort may arise, and occasionally the patient may suffer a great deal of pain. In some cases it is necessary to institute an active line of treatment, in order to keep down complications. The patient should be put to bed and placed on a restricted diet.

According to the *Medical Press*, an instillation of the following may be used locally for its disinfecting purposes:

℞. Menthol ..... gr. viii | 50
Liquid petrolati ..... ℥i | 30

M. Sig.: To be instilled into the nasal passages two or three times a day.

As a gargle the following combination is recommended:

℞. Thymol ..... ℥ss | 2
Menthol ..... gr. xv | 1
Alcoholis ..... ℥iv | 120

M. Sig.: Ten to fifteen drops in half a glass of water as a mouth wash and as a gargle.

If the fever should be of any consequence, warm baths are recommended and a preparation of quinin given internally. The following combination may be given:

℞. Quininæ hydrochloratis ..... ℥i | 4
Syrupi ideae ..... ℥i | 30
Aquæ ..... ℥ii | 60

M. Sig.: Two teaspoonfuls three or four times a day for an adult.

Otalgia and orchitis are the two most frequent complications of epidemic parotitis, consequently when severe earache is present the tincture of opium, a few drops on a small piece of cotton-wool, and applied locally in the external ear, will usually suffice. Locally over the infected glands the following combination is recommended to relieve the pain and to cause the swelling to subside:

℞. Guaiacol ..... ℥ss | 2
Spiritus chloroformi ..... ℥i | 4
Lanolini ..... ℥ss | 15

M. Ft. unguentum. Sig.: Apply to the parotid region, and cover with cotton and oil silk.

If orchitis should arise poultices are recommended, which should be changed every two hours, and when the pain has sufficiently subsided an ointment similar to the following may be applied:

℞. Guaiacol ..... ℥ss | 2
Extracti belladonnæ ..... gr. v | 30
Lanolini ..... ℥i | 30

M. Ft. unguentum. Sig.: Apply locally.

The Bromids.

In his experiments on animals, F. Carteris of Glasgow University, in an abstract in the *Critic and Guide*, states that ammonium bromid is more toxic than sodium bromid, and that with large doses the predominant action is due to the ammonia, and that with repeated non-toxic doses the effects of the bromid may be obtained. In the author's opinion, ammonium bromid is not an eligible compound, because the bromid action is only evident after prolonged administration, while the stimulating action of the ammonium is produced rapidly, but passes off within an hour. As regards the action of the potassium and sodium salts, which, according to general opinion, is about the same, with either, Bernard regards potassium as three times as toxic as sodium, and states that consequently it has a much more depressing effect on the heart. Distefano makes a statement which counteracts this general opinion, by saying that potassium salts, instead of weakening the heart, stimulate it, and according to this writer's opinion, the potassium salts are preferable to the sodium salts. The sodium salts remain in the plasma and tissue spaces, while the potassium salts penetrate into the tissue itself and into the protoplasm, and as a proof of the greater efficacy of the potassium salts, he mentions the universally admitted superiority of the iodid of potassium to that of sodium in the treatment of syphilis.

Rectal Atony.

In the treatment of defective muscular power of the rectum Bodenhamer, in the *New York Medical Journal*, states that the first consideration should be the observance of strict and regular habits regarding the daily evacuation. This may be assisted sometimes by the injection of from a half to a pint of cold water, at a regular time each day. As cold is tonic, stimulant and astringent, it acts somewhat similarly to nux vomica, by exciting the sensibility and contractility of this portion of the bowel. In more obstinate cases, however, Bodenhamer recommends nux vomica as the best remedy, given alone or combined with other preparations. Drastic purgatives should never be used, and the smallest dose of an aperient should be given so as to arouse gently the normal peristaltic action, and this aperient should be continued only until the daily habit of evacuation is established.

With regard to the ingredients composing an astringent and tonic injection, to be used locally in the treatment of atony of the rectum, this author states that the amount should not be more than five or six ounces, and should never be administered until the rectum has been thoroughly emptied of its fecal contents by a proper enema or aperient. This astringent injection should be given once daily at least, and instructions should be given the patient to retain it for a few minutes, if possible. In obstinate cases, a half to a grain of nux vomica may be added to this injection. He recommends for injection the decoction of galls as well as a strong decoction of white oak bark and alum. The following combination is also recommended by him:

℞. Acidi tannici ..... gr. xxx | 2
Vini rubri ..... ℥iv | 120

M. Sig.: For one injection.

He quotes the following combination as being recommended by Trousseau, as one which not only restores the organ to its normal action, but which will also cure anal fissure, if present:

℞. Extracti rhatany ..... ℥ii | 8
Alcoholis
Aquæ dest., āā ..... ℥v | 20

M. Sig.: For one enema.

In some cases the following pill or one with a similar combination is recommended, especially if the atony of the cecum exists with that of the rectum, in order to excite the peristaltic action in those parts which can not be properly reached by an enema:

℞. Ext. aloes ..... gr. xxx | 2
Ext. nucis vomicæ ..... gr. xx | 1 | 30
Ext. hyoscyami ..... gr. xv | 1
Ferri sulphatis ..... gr. x | 65
Olei caryphylli ..... m. v | 30

M. Ft. pillulæ No. xxx. Sig.: One pill at bedtime.

In the treatment of ordinary cases of atony of the anal sphincters, the cold water douche is recommended, applied rather forcibly for four or five minutes directly after each evacuation of the bowels. The following ointment or lotion may be used with advantage in such cases:

℞. Strychninæ sulphatis ..... gr. x | 65
Ung. aquæ rosæ ..... ℥i | 30

M. Sig.: Apply a small amount locally. Or:

℞. Ext. nucis vomicæ ..... gr. viii | 50
Alcoholis ..... ℥ii | 60
Aquæ ammoniæ ..... ℥i | 4

M. Ft. lotio. Sig.: Apply locally.

Medicolegal

Court May Compel Re-exhibition of Person.

The Supreme Court of Texas has held that, where a party has not voluntarily exhibited his person to the jury, a court has no power to compel him to do so. But, in Houston & Texas Central Railroad Co. vs. Anglin, a personal injury case brought by the latter party, it reaffirms the rule that, where a party has once exhibited his person to the jury to show the extent of his injuries, he may be required during the course of the trial to re-exhibit them. In this case the trial judge refused to compel the plaintiff, who had given testimony in his own behalf, and during the course of his examination had voluntarily exhibited his breast to the jury, to again exhibit it to a physician who was a witness for the defendant. The physician had testified that he examined the plaintiff a short while after the accident, and that his breast was then deformed; and it was proposed to show by the witness, after examining the alleged injured part of the plaintiff, that the same condition which existed at the time of the trial existed immediately after the accident. The court holds that the ruling of the judge refusing to compel the re-exhibition constituted reversible error. It says that if the plaintiff had been compelled to exhibit again his breast in the presence of the physician, and the latter, after examining, had been enabled to say that he

saw no difference between its condition at such time and what it was at the time of the accident, the testimony would have been material.

Opinions as to Causes—Failure to Obtain Medical Aid.

The Supreme Court of Missouri, Division No. 1, says, in the personal injury case of Glasgow vs. Metropolitan Street Railway Co., that it was competent for the medical witnesses to state what cause or causes might produce such a result as that in question (apparently a displacement of the womb), and this both of them did without objection, stating that such a fall as claimed could produce it, and that there were many causes which would produce the same effect. But it was incompetent for them to say that in this case the plaintiff's condition was, in their opinion, the result of the alleged fall. It was competent for them, in giving their opinions, to speak of that which they knew from their scientific learning and experience. It was not competent for them to draw conclusions of facts from the evidence in the case. There are cases in which a physician or surgeon may give his opinion, not only as to what might produce a given result, but also as to what in fact did produce the particular result in hand. But such are cases where no other cause could reasonably have produced the effect. Instances of this kind are found in murder cases where the cause of death is the question. A dead body is found floating in the river. To the eye of the casual observer it is a case of drowning. But a man of science makes an examination and testifies that the condition that would result from drowning is absent, but the condition resulting in death from poison is present, and no other cause that could produce death appears. Therefore, he may say it was a case of death by poison. Perhaps even in such case it would be more correct to limit the expert testimony to a statement of the scientific facts, leaving the inevitable conclusion to be drawn by the jury. But when after the scientific facts are proven there is but one conclusion to be drawn, it is not harmful error to allow the witness to state his conclusion. But such is very different from the case at bar, where the witnesses said that many causes produced a like result, and they did not say that one was even more probable than another.

Then the defendant contended that, if the plaintiff suffered the fall she claimed she did, it was her duty to have exercised reasonable care in seeking medical or surgical aid, and that, if she neglected to do so and thereby her injury was aggravated, she was not entitled to recover for the aggravated injury. The court says that this was a correct proposition of law. The law on this subject is treated by the law writers under the head of contributory negligence, and the distinction is drawn between contributory negligence which defeats the action, which is negligence which contributes to the happening of the accident, and contributory negligence which occurs after the accident, but which increases the suffering. In either case, before the action can be defeated or the measure of damages curtailed, the plaintiff must be shown to have been guilty of negligence which contributed to the result. The law did not in this case unconditionally demand of the plaintiff that she obtain surgical aid, or charge on her the consequences of failure to obtain it, because that might have been beyond her power. But it demanded that she use reasonable care to obtain such aid, and it withheld from her the right to recover for what she may have suffered in consequence of her failure to use reasonable care. She did not seek medical aid until thirteen months had passed, and her physicians testified that the probable effect of failure to obtain such aid was an aggravation of the affliction. The reason she gave for her failure to call a physician was that she had no means to pay him, and that she did not apply to the defendant company in the trouble because she hoped all the while she would get better. Whether that was sufficient to acquit her of negligence was a question for the jury.

Practicing Without License—Statute Construed.

The Supreme Court of Minnesota holds, in the case of State vs. Oredson, that section 7896 of the General Statutes of Minnesota of 1894, imposing a fine or imprisonment, or both, on anyone practicing medicine without a license, is to be liberally construed, so as reasonably to effectuate its purpose, to prevent frauds, and to conserve the public health. That an unlicensed person has practiced medicine is the gist of the misdemeanor, and not a gratuitous incident to it. That such person has for a fee prescribed any drug, medicine, or other agency for the treatment of disease is one kind of evidence of guilt, and not the exclusive substance of the offense. The mere fact of graduation from a medical college does not entitle to practice medicine in Minnesota. The offense defined by statute may be committed by a graduate of a medical college, as well as by any other person not licensed to practice medicine, who is not shown to be a medical student practicing under the direction of a preceptor, or not then and there being a physician or surgeon of the United States Army or Navy.

The definition of practicing medicine given on the trial of this case was in accordance with the statute, as follows: "Any person shall be regarded as practicing medicine within the meaning this act, who shall append the letters 'M.D.' or 'M.B.' to his or her name, or for a fee prescribe, direct or recommend for the use of any person any drug or medicine or other agency for the treatment, cure or relief of any wound, fracture or bodily injury, infirmity or disease; and there is a provision that this shall not apply to dentistry." The act, the court says, is a beneficial one, and is entitled to a liberal construction. Its purpose was not, as the counsel for the defendant insisted, to merely make prescribing for a fee the offense: so that the defendant could have practiced medicine generally, could have held himself out to the world as a physician and surgeon, could have examined patients, and inferentially could have operated on them as a surgeon for pay, and yet would not have been guilty of a misdemeanor within the meaning of the act. On the contrary, its plain object was to prevent the public wrong of practicing medicine without a license.

The act, the court continues, was not enacted for the benefit of any profession or of any school or theory of medicine. It was designed to secure the public in whole and in every part from quacks, humbugs, and charlatans masquerading under the venerable and honorable titles of surgeons, physicians and doctors, and to protect the public in a just reliance on the one using these titles as a man of proper education and sufficiently trained in the sciences involved. A just enforcement of that act would tend to prevent the most deplorable swindling of the ignorant poor, who can least afford to pay for the luxury of deception, and who are the most likely to be the dupes of ostensible practitioners, whose competency has not been determined by law, and whose moral deficiencies are evidenced by their false pretenses. Its terms should be construed, so far as reasonably may be, so as to tend to eliminate the suffering of an individual from the misuse of inert drugs when potent ones are needed, and of powerful agencies productive of ill where proper ones might bring relief or effect a cure, so as to avoid many evils of malpractice, and so as to minimize the exposure of the community at large to the spread of avoidable pestilence. The act is at once a statute of frauds and a health ordinance.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia.

February 3.

1 *Readjustment of Education and Research in Hygiene and Sanitation. W. T. Sedgwick, Boston.
2 Problem of Psychiatry in the Functional Psychoses. E. Cowles, Boston.
3 *Observations on Albumoses in Urine. W. P. Elmer, St. Louis, Mo.
4 Roentgen Rays in External Treatment. M. B. Hutchins, Atlanta, Ga.
5 *Influence on Native Population of the Event of the Tuberculous. C. F. Gardiner, Colorado Springs, Colo.

1. Hygiene and Sanitation.—Sedgwick would have sanitation mean the care of the environment (streets, water, milk supplies, sewerage, etc.), and hygiene chiefly the care of the persons or groups of persons (feeding, vaccination, personal hygiene, etc.). The latter would then belong largely to medical men or physiologists, the former to sanitary biologists, chem-

ists and engineers. He laments the small attention paid to hygiene and sanitation, alike in medical schools and in schools of engineering, and looks for a remedy partly in the better definition and separation of these subjects, and partly in the establishment of permanent well-paid positions for trained men in the public health service—which should at the same time be made more general and less local. Sedgwick concludes his paper as follows: Politics must also be wholly eliminated from our boards of health, both state and municipal. There is no republican method of vaccination, no democratic plan of street cleaning. Places on boards of health must not be used as rewards of political activity. The time—if it ever existed—has gone by when a good board of health can be made up of a political doctor, a political saloon-keeper and a political nobody; for no well-trained and self-respecting expert in hygiene or sanitation can or will remain in the dubious and uncertain service of weak, incompetent or shifty characters.

8. **Albumoses in Urine.**—Elmer mentions the following as the diseases in which albumosuria occurs most frequently. Multiple myeloma of bones, tuberculosis, especially pulmonary, croupous pneumonia in the stage of resolution, septicemia, pyemia, abscess, carcinoma and sarcoma when undergoing rapid retrograde changes, and the leukemias and Hodgkin's disease after treatment with Roentgen rays. He recommends the following test for albumose as being the most practical: The reagent consists of a 50 per cent. solution of sulphosalicylic acid in distilled water. This reagent precipitates on contact all proteids found in the urine, but the albumoses redissolve on warming the urine, while albumins, globulins, etc., do not, so that when any or all of the albumin group are present with albumoses filtered the warmed urine will separate them, and the albumoses be determined by cooling the filtrate. Care must be taken to avoid prolonged boiling, for if mucins be present they may be broken down, one of the products being an albumose. A very small quantity of albumoses may be detected by dividing the urine after adding the reagent and warming one part while cooling the other and comparing the tubes before a dark surface.

9. **Event of Tuberculous on Native Population.**—Gardiner claims to have made a thorough study of this question and states that his records show that the natives of open resorts for the tuberculous are in a better physiologic condition to resist tuberculous infection than the average inhabitants of other towns and cities. All the facts seem to prove that it is better to be exposed daily for years to the germs from the tuberculous in a superior climate than not to be so frequently exposed, but to be under the influence of bad air and overcrowding in an unfavorable climate. The event of the tuberculous among the dwellers in our resorts is not so dangerous a factor as it has been supposed to be. The lesson to be drawn from this is to increase human resistance by proper ventilation day and night, for then the tubercle bacillus will lose its power to infect mankind or to destroy life.

Boston Medical and Surgical Journal.

February 1.

6 Sanitary Importance of Clean Milk. C. Harrington, Boston.
7 Results of Operation for the Removal of Cerebral Tumors. P. C. Knapp, Boston.
8 *Two Cases of Erythema Multiforme Desquamativum. P. K. Brown, San Francisco.

8. **Erythema Multiforme Desquamativum.**—The two cases reported by Brown are interesting for several reasons. One of the patients had gastrointestinal crises, fever, joint, heart and kidney complications. The other had intestinal disturbances, fever, slight kidney disturbance, angioneurotic edema and purpura with hemorrhages from the mucous membranes. Digestive manifestations preceded all the attacks in one case and preceded the single attack in the other. For ten days the first patient suffered from epigastric pain, cramp-like in character. When first seen there was a diffuse, tiny, regular eruption all over the trunk, shoulders and thighs, which had not appeared on the face, neck, arms or legs. It was perfectly discrete. It had no crescentic appearance and consisted of tiny reddened areas, slightly raised in the center, each one about the size of a pinhead. There was no pain anywhere. There had been slight throat symptoms forty-eight hours before, but there was no eruption on the cheeks or throat, and no coryza or eye symptoms. The glands were slightly enlarged everywhere. There was no evidence of any skin infection. Temperature was 99.5 the following day, and the eruption had covered the entire body and the face except about the mouth. Where the itching had caused the patient to scratch it a good deal, it was diffusely red between the patches, looking more like scarlet fever. There was a shotty feel to the eruption on the trunk and extremities. The palms and soles were also affected. Desquamation was complete six weeks after the attack was over. The second case was diagnosed at first as one of German measles. There was no eruption on the face at all, but marked pallor. The papillæ on the tongue were prominent and the tongue itself coated. The tonsils were slightly large and red, but there was no membrane. There was no tenderness behind the ears, but the glands in the neck were slightly enlarged. The axillary and inguinal glands were tender and markedly enlarged, some of them being as large as very large beans. There was some swelling of the tissue under the angle of the right side of the jaw. There were some mottled red blotches, one nearly 1 cm. broad, on both ears. Over the chest and particularly over the back there was a slightly mottled but diffuse blush. It was particularly marked over the neck and buttocks, around the genital organs and slightly down the inner side of the thighs. Toward the extremities it became much more mottled, certain of the blotches being quite discrete. On the dependent parts the pressure of the clothes in folds had caused linear ecchymoses, looking very much like long scratches, particularly marked over the buttocks and shoulders. There was a marked absence of eruption or blush in the axillary spaces. This patient had several such attacks, in the last of which the eruption was distinctly purpuric.

New York Medical Journal.

February 3.

9 *Medical Management of Nephritis. J. Tyson, Philadelphia.
10 *Hereditary Syphilis. R. W. Taylor, New York.
11 State Medicine. E. C. Carter, Manila.
12 Case of Tumor of Brain, with Autopsy. W. M. Leszynsky, New York.
13 Trials at the Trial Case. T. H. Shastid, Marion, Ill.
14 Athletics for Young Women. W. L. Howard, Baltimore.
15 *Gonococcus Vaginitis in Little Girl. W. D. Trenwith, New York.
16 *Tuberculosis of the Appendix Vermiformis. H. A. Haubold, New York.

9. **Medical Treatment of Nephritis.**—In this paper Tyson repeats the statements made by him in previous papers.

10. **Hereditary Syphilis.**—Taylor attempts to prove, by cases, that third infection in syphilis is an established fact. A synopsis of the first case is as follows: First.—Grandmother infected with syphilis in 1869, had secondary and tertiary lesions of much severity. She was careless of treatment. She was the first genitor. Second.—In 1872 this woman gave birth to a girl baby which presented classical hereditary syphilitic symptoms. After many vicissitudes this child (the second genitor) grew up seemingly healthy and strong, and never having been infected with acquired syphilis, she in two years gave birth to a baby daughter. Third.—In 1890 this second genitor gave birth to a miserable weakling girl, atrophic, marasmic, with very little strength and vitality, who at birth gave no distinct evidence of hereditary syphilis (third generation), but who in five years developed true dystrophic symptoms; Hutchinson's teeth, keratitis, ear troubles, and osseous swellings, and later showed unmistakable evidence of a virulent form of late syphilitic infection (third) in characteristic gummatous tumors and ulcers. This third syphilitic by inheritance is now growing up a victim of infantilism and general atrophy. A synopsis of the second case is as follows: First.—A healthy woman, married to a man, syphilitic two years, contracted syphilis two years later coincidently with the development of pregnancy. Second.—She gave birth to a male child who, soon after birth, was characteristically hereditosyphilitic and later developed typical undoubted evidences of inherited taint, which showed themselves for several years. He never was infected with acquired syphilis. He married a healthy girl. Third.—Three years after the marriage of this second genitor, the wife gave birth to a thin, weakly girl, who

presented the appearances of infantilism. At 4 years many dystrophic symptoms of the bones and joints developed and were promptly cured by active antisyphilitic treatment. This case, therefore, was a clearly marked illustration of the development of syphilis in three generations. In the first, active syphilis; in the second, virulent hereditary syphilis; and, in the third, a dyscrasic condition attended with well-marked dystrophic changes.

15. **Gonococcus Vaginitis.**—Trendwith emphasizes the following points: 1. The great need for early diagnosis and treatment. 2. The necessity for frequent douching with large quantities of the solution. 3. The nonuse of absorbent cotton as a dressing for the parts. 4. The need for care and gentleness in the treatment. 5. That a case should not be considered as cured until not only the discharge has stopped, but until it is no longer possible to find the gonococcus in the vaginal secretions microscopically. 6. The need of impressing the mother with the serious nature of the disease and the necessity for treatment until the gonococci have entirely disappeared. 7. The greater dissemination of knowledge among men and women who suffer from gonorrhea, as to its infectiousness to others, and its power to do, at times, great harm, at a period remote from the time of primary infection when the disease remains uncured. 8. The great necessity for care in keeping cases of gonococcus vaginitis out of day nurseries and babies' hospitals, because of the epidemic character which it assumes among the inmates once it has gained a foothold.

16. **Tuberculosis of the Appendix.**—The diagnosis of Haubold's case was confirmed microscopically. No tuberculous foci were noted in the peritoneum and a careful examination of the lungs did not reveal any indication of pulmonary tuberculosis. There was no cough and no expectoration. The patient died about nine weeks after the operation.

Medical Record, New York.

February 3.

17 *Clean Air. T. M. Prudden, New York.
18 *What Constitutes Pneumonia? A. H. Smith, New York.
19 *Danger and Protection in X-Ray Work. W. Lehmann, San Francisco.
20 Trachoma in Children. C. C. Bradley, New York.
21 *Two Cases of Pseudoleukemic Anemia of Infancy. E. M. Sill, New York.
22 Air de Luxe. W. P. Northrup, New York.

17. **Clean Air.**—Prudden says that it is interesting to note from the careful experiments which have been made that ordinary ventilation, however effective it may be in supplying fresh air and in removing contaminated gases, has no noteworthy effect in the removal of dust, either floating or at rest. Experiments also prove that hanging garments out of doors merely, is not to be commended. Unless such articles are brushed, or beaten, or shaken, or unless they flap violently in the wind, bacteria are not removed in great numbers. The writer emphasizes the fact that a large part of so-called disinfection might be replaced to advantage with proper methods of sweeping, dusting and mopping, if all these were not so simple and commonplace, and if everyone could realize the significance of dust in the conveyance of infectious agents. He emphasizes the importance of the use of moist mops on the floors, and of moist dust cloths on the solid furniture. He denounces the employment of the feather duster. The sprinkling of damp sawdust on floors before sweeping is a great aid in getting rid of much dust. He declares that the infectious diseases of the respiratory organs are steadily increasing as people are more and more huddled together in offices, dwellings, traveling conveyances and places of public assemblage. A large number of these diseases are directly traceable to infectious material passed off in spitting, coughing and sneezing, by those suffering from various degrees of local disease. Promiscuous spitting should be stopped. The harmfulness of coughing and sneezing can in most instances be controlled by the use of the handkerchief.

18. **What Constitutes Pneumonia?**—Smith contends that a single pneumococcus lodged in an air cell and causing there its specific irritation and consequent exudation, presents all the essentials of the disease. He declares that it matters not if ten minutes later the organism is dislodged and swept away by the exudate, the patient even then has had a pneumonia, if only a monococcal one. If later the bronchiole terminating in the lobule invaded becomes blocked, and the further spread of the infection is prevented, the patient may escape with a unilobular pneumonia, but it will be pneumonia nevertheless. Smith believes that such abortive attacks are very common.

19. **Danger and Protection in X-Ray Work.**—Lehmann emphasizes the necessity for shielding the operator not only from the Roentgen rays, but from the secondary rays as well. He says that the best means of protection is a gown of impermeable material. Complete suits have been made of material of different degrees of safety, the heavier and bulkier the better, and sheet lead is the only safe thing. In a suit of this sort described by the author, the apron of Roentgen-proof material reached from the neck to the knees; the cap covered the face and head and was provided with lead glasses. The gloves were also ray-proof, but neat enough to permit of handling screen and apparatus.

21. **Pseudoleukemic Anemia of Infancy.**—Sill reports two cases. One of his patients died six weeks after he was called in; the other is still alive after five months and is steadily improving. The treatment has been proper diet, cod-liver oil and Fowler's solution.

St. Louis Medical Review.

January 27.

23 *Appendicitis Complicated with Typhoid Fever. A. Avery, Sapulpa, I. T.

February 3.

24 *Bacterial Inoculation as Guided by Wright's Opsonic Index Curve, with Special Reference to the use of Tuberculin. J. R. Clemens, St. Louis.
25 Present Position of the Surgery of Carcinoma of the Cecum. G. W. Broome, St. Louis.
26 Materia Medica. D. L. Field, Jeffersonville, Ind.

23. **Appendicitis Complicated with Typhoid.**—When first seen, Avery's patient was suffering acute pain in the abdomen. This pain was most intense over the hypochondrium, but the entire abdomen was tender to the touch, with severe local tenderness over McBurney's point. The right rectus was rigid; the patient was nauseated at times, had some headache, and was constipated. The temperature varied between 101 and 103.5 F. In spite of all medication the bowels did not move until about the fifth or sixth day. About the seventh day a slight wave made its appearance in the temperature chart, an evening rise and a morning fall. Rose-colored spots appeared on the abdomen three or four days later. The stools at this time were characteristic of typhoid. The disease ran the usual course and the patient made a complete recovery. A laparotomy was then done and the appendix was found completely wrapped up by the omentum to which it had become adherent, and showed distinct signs of recent inflammation.

24. **Wright's Opsonic Index.**—Attention is drawn by Clemens to the advantages of Wright's method as a means for diagnosing tuberculosis. He considers it harmless and practically infallible. It is especially valuable because the diagnosis is made outside the patient's body; it permits of the use of tuberculin to the patient's best advantage—curative; it removes the dangers of diagnosis by tuberculin.

American Journal of Medical Sciences, Philadelphia.

January.

27 *Influence of Light in the Production of Cancer of the Skin. J. N. Hyde, Chicago.
28 *New Method of Operating on Dupuytren's Contraction of the Palmar Fascia. W. W. Keen, Philadelphia.
29 Success which Attends Extraction of Cataract and the Causes that Contribute to It. S. Theobald, Baltimore.
30 Fever in Chronic Endocarditis. J. S. Thacher, New York.
31 *Opium in Myocarditis, Weak Heart, and Dilated Heart. J. H. Musser, Philadelphia.
32 Disease of the Heart Muscle Treated in the Bellevue Hospital Out-Patient Department from November, 1903 to June, 1905. T. B. Barringer, Jr.
33 Classification of Cases Heretofore Called Rheumatoid Arthritis. P. W. Nathan, New York.
34 *Rheumatism of the Stomach, with Incidental Hematemesis of Uncertain Origin. H. Illoway, New York.
35 *Extraordinary Case of Anthracosis Simulating Thoracic Aneurism. H. Sewall, Denver, Colo.
36 Enteric and Mesenteric Cysts. J. C. Ayer, New York.
37 Action of Various Substances on Pure Cultures of the Amœba Dysenteriæ. J. B. Thomas, Philippine Islands.
38 Pyelonephritis of Pregnancy Considered from the Obstetric and Surgical Standpoint. C. G. Cumston, Boston.
39 Tumor of the Cauda Equina. E. Schmoll, San Francisco, Cal.
40 *Spirochete Found in Syphilis. R. C. Rosenberger, Philadelphia.

27. **Light and Skin Cancer.**—According to Hyde, the skin of the human body, in a certain proportion of individuals, and in those only, is hypersensitive to the action of the actinic rays of the spectrum. This hypersensitiveness may be exhibited in the production of either hyperemia, pigmentation, telangiectasis, atrophy, hyperkeratosis or cancerosis of the skin; or by all, and at times in a determined order of succession. In the form of childhood cancerosis known as xeroderma pigmentosum, the pigmentation, telangiectasis, atrophy, hyperkeratosis, and cancerosis of the skin resulting from exposure to rays of light are exhibited early in life, instances of this disorder being exceedingly rare. Pigmentation, telangiectasis, atrophy, hyperkeratosis, and cancerosis of the skin occur in adults much more frequently than in childhood, reaction to the play of actinic rays of light on the surface being chiefly determined after the middle periods of life have been reached. Physiologic pigmentation of the skin in the colored races seems to furnish immunity against cancerosis of that organ. The colored races apparently suffer less than the whites from cancer of other organs than the skin. This relative immunity may be due to the protection from actinic rays of light furnished by the pigment of the integument.

28. **New Operation for Dupuytren's Contraction.**—Keen refers to a case of Dupuytren's contraction of the palmar fascia in which he performed a new operation, the parts being anesthetized by neural infiltration. He first infiltrated the skin just above the wrist, over the median and the ulnar nerves, with a solution of beta-eucain and adrenalin, of which the following is the formula:

R.	Sol. adrenalin chlorid	℥iiss	10
	Beta-eucain	℥ss	2
	Sodii chlorid	℥ii	8
	Aquæ dest. q. s. ad	℥vii	210

Having exposed these two nerves he then injected a few drops of this same solution into them. After waiting for a considerable time he attempted to begin the operation, but found that it was exceedingly painful. Scarcely any diminution of sensation had been produced by the infiltration, although the injection at the site of the operation on the two nerves had been entirely satisfactory. He then injected into each nerve four or five drops of a 4 per cent. solution of cocain, and within three minutes was able to begin the operation without causing the slightest pain. In consequence of the very careful dissection in the palm, the operation lasted over half an hour. The local anesthesia at its end was quite as satisfactory as at the beginning. He began the incision at the ball of the thumb on a line with the interspace between the forefinger and middle finger, went down almost to the web between the forefinger and middle finger, then transversely to a point corresponding to the beginning of the incision on the other side of the hand. The dissection of the flap was begun at the transverse incision corresponding to the knuckles and went directly down to the sheaths of the tendons. He dissected back the entire flap, including on the under surface of the flap the entire palmar fascia. He then dissected away the palmar fascia from the under surface of the flap, the fingers of the assistant being on the palmar surface of the skin, so as to warn him if he got too close to the skin. In order to dissect out the fibers going to the index and the little fingers, he next undermined the skin overlying them, and was able to get at the beginning small bands of fibrous tissue which had not been turned back in the large flap. He tied half a dozen small vessels with catgut, so as to have as little danger from any effused blood as possible. Union took place by first intention throughout both of the small operation wounds over the nerves and that in the palm of the hand. No sloughing whatever took place; even a little nick that he made inadvertently in the skin of the palm was rather advantageous, as it allowed what little blood was effused under the flap to escape. The patient was discharged from the hospital with almost normal motion of the fingers.

31. **Opium in Heart Disease.**—According to Musser, there are sound clinical reasons for the belief that opium is a tonic in cardiac debility. He says that in cases of weak heart after exhausting disease, after prolonged mental and physical pain, and without organic lesion of valves or muscle, opium is of advantage. In cases of failing compensation, with the onset of stasis, the heart is supported, especially if the unfortunate possessor is an impressionable subject who frets and fumes because of the ordinary irritations of life. In the gradual engorgements from myocardial dilatation, in chronic parenchymatous nephritis, and in arteriosclerosis it is of value. If the patient is hypochondriacal or hypersensitive the second daily dose of opium invites sleep and induces a feeling of well-being. The dyspnea of myocarditis is relieved or prevented by continuous small doses of morphin for a very long time. Musser has seen a form or stage of myocarditis with restlessness, Cheyne-Stokes breathing, dyspnea and rapid pulse helped by continuous doses of opium. The tachycardia of Graves' disease is relieved and in three of his cases it appeared to contribute to the cure of the disease. In nervous and irritable patients opium is almost necessary to induce comfort.

34. **Rheumatism of Stomach.**—Illoway cites the case of a man, aged 67, of abstemious habits, who was troubled with dyspepsia for thirty years. He suffered from attacks of pain in his stomach, which usually came on about the fall of the year and continued, off and on, throughout the whole winter. He always felt well during the summer heat. The diagnosis was dyspepsia, and various dietary regimens and many medicines were prescribed, but the result was always a negative one. For a year past he suffered severely from cramps, coming on mostly in the night, and becoming more severe when the weather was about to change. After a careful study of the symptoms of this case and the results obtained from climatic treatment, Illoway is convinced that it was a case of rheumatism of the stomach.

35. **Anthracosis Simulating Thoracic Aneurism.**—Sewall's patient suffered from a mild degree of pulmonary tuberculosis. Besides this there could be heard a systolic bruit confined to an area represented by the lower half of the right scapula. This bruit was suspected to arise from a thoracic aneurism. The patient felt quite well except for some shortness of breath. After a six months' stay in bed she coughed up some bright blood and complained of intense pain over her heart, greatly aggravated by inspiration. These events were taken as evidence that an aneurism had ruptured by the section, the blood probably penetrating the pericardial cavity. Death ensued after twenty-four hours. At the autopsy no sign of aneurism was found. At the root of the right lung there was a hard, solid mass, pyriform in shape, four inches long, over three inches wide and two and a half inches deep. This mass, on section, was found to be black in color and gristly in resistance. At the root of the left lung, immediately posterior to the left bronchus, was a similar mass consisting of two portions. Numerous small black bodies, the size of grains of wheat, were scattered throughout the lung. An extraordinary degree of emphysema involved the margins of the lung. On chemical examination the pigmented masses were found to be coal dust. Hyperplasia of connective tissue also was present in the masses, and Sewall is of the opinion that this was due to the irritation of the coal dust, a true anthracosis.

40. **Spirochete in Syphilis.**—During the past four months Rosenberger has made studies of chancres, mucous patches, enlarged glands, condylomas, eruptions and cerebrospinal fluid with a view to finding the spirochete and establishing its causative relationship to syphilis. In every specimen examined, with the exception of the cerebrospinal fluid, the *Spirochæta pallida* was demonstrable.

41. **Floating Kidney.**—According to Longyear, the usual operation of nephropexy is inadequate because it fails to meet all the indications in the conditions present. To be effective the operation must certainly do one thing which the stitching of the stripped kidney, only, to the loin, can not accomplish, viz., the prevention of the descent of the ascending colon and cecum. The operation must have for its aim the attachment of both kidney and bowel; or the nephrocolic attachment may be severed—thus preventing traction on the kidney and duodenum—and the kidney fixed by simply stitching the

severed ligament into the wound at its appendage. The operation which Longyear has found the most easy of accomplishment, and which seems to meet the two indications mentioned, is the fixation of the nephrocolic ligament into the upper angle of the wound without severing it from the colon, and also fastening any redundant mesentery that may be present in the lower angle of the wound. The convergence of the framework of the fatty capsule into this ligament makes a structure of sufficient strength to be depended on to hold the displaced organs, if securely attached to the aponeurotic tissue, preferably where it is thick near the twelfth rib. The kidney fixed by this ligament is placed at nearly its normal position and is not held in an immovable position, as is the case when united to the muscles by the usual operation. The bowel is also held by the same attachment and undue descent of the cecum prevented, and it is possible that this will prove sufficient, but at present the writer deems the shortening of a redundant mesentery best, if for no other reason than that it will prevent traction on the other attachment while it is becoming firmly fixed. The opening into the peritoneal cavity has the added advantage of giving free access to the kidney and enabling the operator to handle the organ at will, through its close attachment to the colon, traction on the latter, brought through the wound, serving to bring the kidney close to the opening. Longyear says that the difficulty of handling the kidney when grasped by the sides of the fatty capsule has been experienced by all, as the tissue gives way readily and appears to have little resisting power. This is because the fine fibers forming the network of this capsule are spread out and the trabeculæ widely separated by the fat deposited between them. As they converge below the lower pole of the kidney to become inserted into the posterior wall of the bowel, they lie parallel to each other, and by their aggregation form a strong band of a good deal of resisting power, so that the kidney can be readily held in firm fixation by means of a blunt hook passed around it, permitting complete control of the organ for examination or farther operation.

Detroit Medical Journal.

January.

41 Etiology of Floating Kidney, with Suggestions Changing the Operative Technic of Nephropexy. H. W. Longyear, Detroit.
42 Neurasthenia. C. W. Hitchcock, Detroit.
43 Anesthesia and Urethral Strictures. C. S. Oakman, Detroit.
44 Cost to the State of Those in Public Asylums Suffering from the Results of Venereal Diseases. C. B. Burr, Flint, Mich.
45 Venereal Disease in Ophthalmology. F. Carrow, Detroit.
46 Extradural Abscess—Radical Operation. E. Amberg, Detroit.

Journal of the Association of Military Surgeons, Carlisle, Pa.

January.

47 Prevention of Disease in the Army and the Best Method of Accomplishing that Result. J. R. Kean, U. S. A.
48 *Proposed Regimental Medical Supply Table for the National Guard. S. C. Stanton, Chicago.
49 Stretchers Used on Warships. S. Suzuki, I. J. N.
50 Danger from Typhoid Urine in Military Camps. C. S. Butler.
51 Emergency Field Service Tourniquet. H. S. Hansell, U. S. N.

48. **Medical Supply Table for National Guard.**—Stanton has prepared a list of fifty-four medicines which he believes contains all the medical supplies absolutely essential for an ordinary tour of duty of a regiment of the national guard. No quantities are specified, as it is intended that the state shall keep these supplies in store, and that requisitions shall be made from day to day as occasion may demand. This medical supply table has been adopted as the official supply table for the use of the Illinois National Guard and Naval Reserve. Included in this list are acetanilid compound, boric acid, borosalicylic acid, salicylic acid, alcohol, alum, ammonium bromid, aromatic spirits of ammonia, amyl nitrite, bismuth subgallate, compound tincture of benzoin, chloroform, antiseptic bichlorid tablets, iodin, calomel, magnesium sulphate, morphin, Dover's powder, nitroglycerin, castor oil, peptonizing tablets, petrolatum spissum, aloin compound pills.

Brooklyn Medical Journal.

January.

52 Pus in the Pelvis. G. McNaughton.
53 *Surgery of the Female Pelvic Floor. C. Jewett, New York.
54 Plea for the Early Operative Diagnosis of Carcinoma of the Stomach. G. R. Fowler, New York.
55 Postoperative Paralysis. R. S. Fowler, New York.
56 The Medical Side of Surgery. W. S. Hubbard.

53. **Surgery of Pelvic Floor.**—Jewett summarizes his paper as follows: The pelvic floor is essentially a muscular diaphragm. The muscles of the floor are disposed in two distinct layers. These layers are separated by the plane of the hymen. The upper layer is the levator ani. The general trend of the levator fibers is toward the coccyx. The rectum and the perineal body are in relation with the median borders of the levator muscles. The tubular viscera are slung in the pelvis mainly by the levator attachments to the rectum and to the bridge of fibrous elements in the perineal body. The most essential part of the obstetric injury is the rupture of these fascial attachments behind the vaginal sulcus and alongside the rectum. The reparative operation should be addressed, in the main, to the restoration of these fascial attachments. Jewett believes that restoration *ad integrum* is best effected by the technic of Emmet, and that Holden's operation is the simplest and most definite of the procedures yet devised which attempts support by substituting an artificial for the natural relations of the pubic bands of the levator muscles.

American Journal of Surgery, New York.

January.

57 Technic of Ureteral Dilatations. F. C. Valentine and T. M. Townsend, New York.
58 Diagnosis and Differentiation of Cervical Tumors and Enlargements. M. A. Austin, Anderson, Ind.
59 Plaster of Paris, and How to Use It. (To be continued.) M. W. Ware, New York.
60 Relation of Malposition of the Uterus to Endometritis. R. Müller, Hamburg, Germany.
61 *Reflections on Inguinal Hernia. C. A. Butler, Hohenwald, Tenn.
62 Insanity a Symptom of Old Fracture of Skull: Operation: Recovery. J. E. Chambers, St. Louis.

61. **Inguinal Hernia.**—For the radical cure of inguinal hernia Butler employs a modification of Halstead's operation: A skin incision is made parallel to Poupart's ligament and three-fourths of an inch internal to it, extending from a point slightly beyond the internal abdominal ring to the spine of the pubes. The subcutaneous tissues are divided in their turn the full length of the skin incision. The external oblique is first incised parallel to the direction of its own fibers, then the internal oblique and transversalis are cut, and finally the transversalis fascia having been divided, the spermatic canal is fully exposed from the internal to the external abdominal ring, thus bringing into view the cord. The vas deferens is isolated and if there is any tendency to enlargement of its accompanying veins all but two or three are ligated, above and below, and dissected out. The subcutaneous incision is extended five-eighths of an inch or more beyond the internal ring, in order to release the constriction and to get firm, fresh tissue from which to build the new exit for the cord. Following this the sac is opened, its contents carefully examined and replaced within the abdomen. A ligature of catgut is now passed around the neck of the sac close to the internal ring and the sac is cut away. The ends of the ligature which have been left long are threaded separately through long curved needles, passed eye-end first through the abdominal opening alongside of the stump of the sac and brought out a quarter of an inch apart through the internal oblique at a point one and one-half inches internal to the upper angle of the incision, where gentle traction is made to draw the stump of the sac away from the field of operation, when, by tying the ligature, the stump is held in a permanently displaced position. Any cicatricial mass or tissue of questionable vitality is dissected away from about the old internal abdominal ring. Each muscular layer is sutured separately, allowing the edges to overlap as much as the tension will allow, until the external oblique is reached. Instead of suturing the aponeurosis of the external oblique in a direct line, as in case of the other layers, a strip of one-half inch wide and one and one-half inches long is cut from the internal border of the external oblique at a point directly opposite the site of the new ring, leaving the upper end of the strip fast and passing the loose end under the cord and suturing it to the superior surface of Poupart's ligament. This gives a firm ring with the fibers running crosswise to the direction of greatest strain. The remainder of the aponeurosis is sutured below this loop in the same manner as the underlying structures, using silk or fine silver wire. Butler says that this portion of the method was employed by

the late W. V. Morgan of Indianapolis, for two years prior to his death and since that time by himself, together in more than fifty cases, with uniformly good results. The hernia now having been reduced, the stump of sac displaced, away from the operative field, the cord located on its new bed and the hernial opening obliterated, all that remains to be done is to suture the skin firmly with kangaroo tendon and to apply a dry dressing.

Archives of Ophthalmology, New York.

November.

63 Extraction of Cataract in the Capsule. H. Smith, Jullundur, Punjab, India.
64 Two Cases of Subperiosteal Hemorrhage of the Orbit from Scurvy. C. B. Meding, New York.
65 Melanoma of the Iris. E. Anargyros, Athens.
66 Examination for Central Scotoma. C. Hess, Würzburg.
67 Tenotomy and Advancement. C. Froelich.
68 Tetany-Cataract. Ed. Zirm, Olmütz.

St. Louis Courier of Medicine.

December.

69 Albuminuric Iridocyclitis. N. M. Semple, St. Louis.
70 Stab Wound of the Heart. R. H. Campbell, St. Louis.
71 Anatomic and Pathologic Observations on the Formation of Hernia at Hesselbach's Triangle. W. T. Coughlin, St. Louis.
72 Formation of Hernial Sac by the Obliterated Hypogastric Artery. W. C. G. Kirchner, St. Louis.
73 Tumors of the Cerebellum. E. A. Babler, St. Louis.
74 Alkalies in Infant Feeding. J. Zahorsky, St. Louis.

Journal of Medicine and Science, Portland, Maine.

December.

75 Silver Salts in Ocular Therapeutics. G. F. Libby, Denver.
76 Some of the Methods for the Treatment of Cancer of the Rectum. L. H. Adler, Jr.
77 A Physician's Pilgrimage. H. F. Twitchell, Portland.
78 Complications of Pregnancy, Treated Surgically. F. D. Donoghue, Boston.
79 How to Buy Life Insurance, a Reply to the Critics of the Life Insurance Companies. B. G. March, Portland, Me.

Vermont Medical Monthly, Burlington.

January.

80 Iniencephalus. M. S. Abbott and F. Lockhart, McGill.
80½ General Principles of Alkaloidal Medication. W. C. Abbott, Chicago.
81 Acute Diarrheas of Children. J. H. Buffum, Wallingford, Vt.

Woman's Medical Journal, Toledo, Ohio.

December.

82 Prevention of Tuberculosis. G. W. Webster, Chicago.
83 Psychology of Disease. M. M. S. Johnstone, Chicago.

Bulletin of the American Academy of Medicine, Easton, Pa.

December.

84 Altruism in the Medical Profession. W. S. Hall, Chicago.
85 Report of Committee on Laws Regulating the Practice of Medicine. C. McIntire, Easton, Pa.

Journal of Cutaneous Diseases, New York.

January.

86 Case of Undetermined Tropical Ulceration Involving the Nose, Pharynx and Larynx. J. A. Fordyce, New York, and W. F. Arnold, U. S. N.
87 Acute Septic Pemphigus. G. W. Crary, New York.
88 Tuberculous Verrucosa Cutis. J. B. Shelmire, Dallas, Texas.

American Practitioner and News, Louisville.

January.

89 Relation of Gynecology to Cystoscopy and Ureteral Catheterization. B. Robinson, Chicago.
90 How to Study the Heart. E. Marshall, Louisville.
91 Gastroptosis. J. J. Moren, Louisville.
92 *Vapor Method of Anesthesia. J. T. Gwathmey, New York.

92.—See abstract in THE JOURNAL, Oct. 28, 1905, page 1359.

Denver Medical Times.

January.

93 Intestinal Obstruction. T. H. Hawkins, Denver.
94 Id. F. L. Dixon, Denver.
95 Intestinal Obstruction from Carcinoma of the Cecum. C. B. Lyman, Denver.
96 Death of Hannah Greener, the First Victim of Chloroform. C. G. Parsons, Denver.
97 Radiology and Electrotherapeutics. G. H. Stover, Denver.
98 Experiences During the Russo-Japanese Naval War. S. Suzuki, I. J. N.

Kentucky Medical Journal, Louisville.

January.

99 Present Status of Gastric Surgery, with Special Reference to the Treatment of Chronic Ulcer. L. Frank, Louisville.
100 *Gastric Ulcer—Its Causes—The Pre-Ulcer Stage. C. G. Lucas, Louisville.
101 *Gastric Ulcer—Its Diagnosis and Treatment. S. E. Woody, Louisville.
101½ Surgical Aspects of Gastric Diseases. A. Schachner, Louisville.

100 and 101. Id.—Nov. 4, 1905, page 1430.

St. Paul Medical Journal.

January.

102 Injuries in the Vicinity of the Elbow Joint. J. E. Moore, Minneapolis.
103 Trachoma and Its Treatment. C. Williams, St. Paul.
104 Management of Acute Suppurative Otitis Media. L. A. Nelson, St. Paul.
105 Spastic Constipation. T. W. Stumm, St. Paul.

Albany Medical Annals.

January.

106 Organization, Methods and Responsibilities in the Study of Medicine. A. Vander Veer, Albany.
107 Iridocyclitis. F. T. Clark, Westfield, Mass.
108 Malignant Ovarian Tumors in Children. J. L. Donhauser, Albany, N. Y.

Washington Medical Annals.

January.

109 Eye Lesions of Syphilis from Standpoint of the General Practitioner. W. K. Butler, Washington, D. C.
110 Cheesy Tubercular Mesenteric and Retroperitoneal Glands in an Adult. D. S. Lamb, Washington, D. C.
111 Sarcoma of the Tibia. E. M. Hasbrouck, Washington, D. C.
112 Tuberculous Meningitis in an Adult. D. S. Lamb, Washington, D. C.
113 Lobar Pneumonia Followed by Meningitis. S. S. Adams, Washington, D. C.
114 Acute Yellow Atrophy of the Liver. D. S. Lamb, Washington, D. C.
115 Cases of Gastric Ulcer. T. N. Vincent, Washington, D. C.
116 Diphtheria of the Air Passages; Death by Asphyxia. D. S. Lamb, Washington, D. C.
117 Historical Account of the Installation of Slow Sand Filtration of the Potomac River Water for the City of Washington. G. W. Cook, Washington, D. C.
118 Diseases of the Indians, More Especially of the Southwest United States and Northern Mexico. A. Hrdlicka, U. S. National Museum.

Medical Herald, St. Joseph, Mo.

January.

119 Points on the Management of Labor. C. B. Hardin, Kansas City.
120 Treatment of Patients After Abdominal Operations. D. Morton, St. Joseph.

St. Louis Courier of Medicine.

January.

121 Tuberculosis in the Mississippi Valley. W. Porter, St. Louis.
122 Juvenile Glaucoma Simplex Associated with Myasthenia Gastrica et Intestinalis. J. Green, Jr., St. Louis.
123 Treatment of Empyema. R. Hill, St. Louis.
124 Tumors of the Cerebellum. (Continued.) E. A. Babler, St. Louis.

Annals of Gynecology and Pediatry, Boston.

January.

125 Tubal Abortion. H. C. Coe, New York.
126 Hydatid Disease of the Ovary. W. T. Gibb, New York.

Colorado Medicine, Denver.

January.

127 Loose Bodies in the Knee Joint. F. G. Connell, Salida, Colo.
128 Cases of Morphinism. J. E. Courtney, Denver.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

January 20.

1 Treatment of Arteriosclerosis. J. Barr.
2 *Significance of Small Quantities of Sugar and of Albumin in the Urine. R. W. Burnet.
3 Clinical Estimations of Purin Bodies in Gouty Urines. I. Walker.
4 *Chemiotaxis. J. O. W. Barratt.
5 Diagnostic Value of X-Rays. J. M. Davidson.
6 Lead Poisoning from Electrolysis of Water Pipes. G. A. E. Roberts.
7 *Action of Trypsin on the Living Cells of Jensen's Mouse-Tumor. J. Beard.

2. **Significance of Sugar and Albumin in Urine.**—Burnet thinks that it may be said that the presence of albumin in any appreciable amount in the urine is not normal nor physiologic, but that it does not necessarily imply coarse pathologic change, and that it does not necessarily mean that the existing disturbance of function is permanent or progressive. At the same time, it can not be denied that a certain number of patients who at first are rightly placed in the above category do later show signs of definite organic kidney disease. The presence of sugar in the urine in any appreciable quantity is abnormal; in the young it is of serious import, and, if persistent, is likely to lead to diabetes; in people past middle life, and especially in those of gouty type, it is of less consequence and usually yields to treatment more or less speedily, to recur,

however, in some cases, under conditions similar to those under which it first appeared. The presence of both albumin and of sugar in the urine indicates serious disturbance in the metabolic processes, calling for relief to the nervous strain which the patient may have been undergoing, and an adjustment as far as can be of his environment, but Burnet thinks that under favorable conditions these patients may continue in at least fair average health for many years.

4. **Chemiotaxis.**—Barratt summarizes his observations as follows:

1. Paramœcia pass readily into tubes containing acid and alkaline solutions of sublethal concentration, but pass still more readily into control tubes containing the same liquid as that in which the paramœcia as immersed.
2. Only negative chemiotaxis appears to be exerted by acids and alkalies on paramœcia. This negative chemiotaxis is marked in alkaline solutions of lethal concentration, and is slighter in acid solutions of lethal concentration.
3. There is no parallelism between (*a*) the lethal concentration of acids and alkalies for paramœcia, and (*b*) the chemiotaxis of paramœcia in respect of acids and alkalies.
4. The taxis of paramœcia is modified when these organisms are transferred from hay infusion to distilled water.
5. Chemiotaxis is not to be explained simply by reference to the acidity or alkalinity of the solutions employed. Mere change of concentration is an important factor in its production.
6. Negative chemiotaxis does not necessarily indicate that the liquid tested acts injuriously on the organisms employed.

7. **Action of Trypsin on Living Cells.**—Beard tested the action of trypsin on the living cells of a Jensen's mouse-tumor. Two minims of a 1.5 per cent. solution of trypsin in sterilized distilled water were injected on four different occasions in the course of ten days. One of the mice was then found dead and a postmortem examination failed to reveal any cause of death. The microscopic examination demonstrated that every cell of the tumor was degenerated, fully half of the cells being represented by shapeless masses of particles, probably the remains of nuclei, and all the rest were mere skeletons of cells. The somatic tissues of the mouth, as represented by the leucocytes and connective tissue cells, were quite normal. The second mouse received nine injections in twenty-two days. The mouse was then killed and the tumor was exposed. The growth was about the size of a lentil and the cells were all degenerated. Beard believes that at the time this mouse was killed its cure from the cancer was not far distant, and that even without further treatment the tumor would in all probability have been absorbed shortly. A control mouse died at the same time that the second mouse was killed. The tumor in this control mouse was as large as the terminal phalanx of a man's thumb. Beard says that no matter how often this experiment is repeated, even with smaller doses of trypsin, the like results will be obtained. He is convinced that the action of trypsin on the cancer cell is to pull down the cancer albumin and the cancer ferment (malignin) produced by this.

The Lancet, London.

January 20.

8 Practical Diagnosis of the Diseases of the Skin. W. Evans.
9 *Bradycardia and Cardiac Arrhythmia Produced by Depression of Certain of the Functions of the Heart. J. Hay.
10 *Relief of Certain Headaches by the Administration of One of the Salts of Calcium. G. W. Ross.
11 Surgery of the Common Bile Duct. B. G. A. Moynihan.
12 *Primary Pneumococcus Peritonitis. W. C. G. Ashdowne.
13 Necrosis of the Entire Renal Cortex of Both Kidneys. H. C. Lloyd.
14 Acute Hemorrhagic Pancreatitis. G. R. Jeffrey.
15 Volvulus of the Ascending and Transverse Colon, with Unusual Complication. J. Phillips.

9. **Bradycardia and Cardiac Arrhythmia.**—Hay reports a case of bradycardia due to heart block. When the patient was first seen the block was caused by depression of conductivity; later the conductivity became practically normal and the block which persisted was found to be caused by depression of excitability. Atropin increased the frequency of the stimulus production, but had no influence on the power of conductivity. Sounds were heard during the diastolic phase of the ventricles; they were synchronous with the wave in the jugular vein caused by the systole of the right auricle. Hay thinks the assumption justifiable that the sounds were produced by the auricle in its systole, and that the depression of the conductivity and excitability of the myocardium was probably due to impaired metabolism, secondary to an insufficient blood supply, the result of arteriosclerotic changes in the coronary arteries. The excitability of the musculature was unstable, possibly as a result of nervous influences such as mental excitement.

10. **Calcium Salts as a Headache Cure.**—Ross believes that we have in the salts of calcium a rational and effectual means of relieving headaches which are due to a deficient coagulability of the blood. He prefers the lactate of calcium to the chlorid because the latter is unpalatable, often nauseating, and occasionally not absorbed. The following has proved a satisfactory mixture:

Calcium lactatis	gr. xv	1 |
Tinct. capsici	m. ½	|033
Aquæ chloroformi	℥i	30 |

Sig.: To be taken three times a day before noon.

If more convenient, fifteen grains of lactate of calcium dissolved in one-third of a tumbler of water may be given in place of the mixture. If the lactate of calcium is not obtainable, fifteen grains of the chlorid and one ounce of camphor water may be substituted. The ingestion of one or two pints of milk a day is advisable though not essential. Ross says that in a number of cases, usually of the less severe type, considerable relief is felt in from half to one and a half hour after the administration of the calcium salt. In others the relief comes during the first twenty-four hours of treatment, while in almost all the cases the headaches disappear after the fourth day. He reiterates that it is advisable to continue the administration of calcium for three weeks in the milder type of headaches, and for six weeks in the more severe types. Ross has treated 48 patients according to this method.

12. **Primary Pneumococcus Peritonitis.**—Ashdowne reports a case of acute peritonitis due to a primary infection by the diplococcus pneumoniæ. With the exception of pain after meals for the past six months she had been quite well until fourteen days previously, when she was seized with abdominal pain, accompanied by diarrhea and vomiting. This she attributed to an error of diet and took some brandy, which relieved the pain. She remained in bed for two days, taking no solid food, and on the third day had recovered sufficiently to resume her household duties. Two days before admission to the hospital she was again seized with acute abdominal pain and diarrhea; she felt sick but did not vomit. She again treated herself, but as the symptoms continued on the following day she consulted her medical man, who gave her medicine which stopped the pain and diarrhea for the time. In the evening the pain returned and the abdomen commenced to swell. The abdomen was distended, more so above the umbilicus than below it. Movement was impaired, but there was no muscular rigidity. There was some tenderness over the right iliac region, but no evidence of a tumor. The abdomen was resonant except over the hypogastrium. Liver dullness was present. Rectal examination revealed nothing abnormal. The patient's menstrual periods were regular and one was then in progress. The heart and lungs were normal. Her temperature was 103.6 F., the pulse was 128, and the respirations were 32. The distension was most marked in the upper part of the abdomen and there was tenderness on pressure in this region, but the lower segment was less distended and there was no tenderness. The iliac fossæ were quite free from swelling or tenderness. On opening the abdomen in the middle line above the umbilicus, the stomach, which was greatly distended, presented. A quantity of pus was found between the stomach and the liver with thick fibrinous deposits on the surface of the viscera in the vicinity. The pus was odorless, creamy, and of a greenish-yellow color, with numerous flocculi floating in it. Some of this was collected and set aside for bacteriologic examination. The fibrinous deposits adhered to the peritoneal covering of the viscera and on removing them that membrane was seen to be lusterless, reddened, and in places inclined to bleed. No lesion of the stomach, duodenum or gall bladder could be found. A second opening was made below the umbilicus and a similar condition was found there. The appendix, intestines and uterine appendages were each in turn examined, but without finding anything to account for the onset of the condition. The peritoneal cavity was then sponged out and well flushed with sterilized water. A Keith's tube was placed in the pelvis and the rest of the incisions were closed. The patient recovered from the anesthetic, but in the evening be-

came very restless and later delirious, and died early the following morning. The pus removed at the time of the operation contained encapsulated diplococci and a pure culture of diplococci was obtained from it. There were no other organisms present.

Journal of Tropical Medicine, London.

January 15.

16 Fit and Unfit Persons for Residence in Warm Climates. W. Hartigan.
17 Mode of Infection in Malta Fever. E. H. Ross.
18 The Mosquito Worms of Trinidad and Their Real Nature. A. J. B. Duprey.
19 Is Malta Fever Peculiar to Malta? L. P. Phillips.

Semaine Médicale, Paris.

20 (XXVI, No. 2.) Les mesures sanitaires appliquées dans l'Afrique occidentale française. (See news item, page 444.)
21 *La lithiase du cholédoque. A. Chauffard.
22 Les réflexes de la pupille. E. Venneman.
23 (No. 3.) L'exercice illégal de la médecine devant les tribunaux français depuis la mise en vigueur de la loi du 30 Novembre, 1892.
24 *Le souffle systolique de l'insuffisance aortique pure. M. Couto (Rio de Janeiro).

21. **Lithiasis of the Common Bile Duct.**—Chauffard gives an illustration of a calculus weighing 9 gm. (nearly 140 grains) extracted from the common bile duct of a man of 48; there was no trace of inflammation or disturbance in the other biliary passages. He has also had occasion to observe a second case of pure lithiasis of the common bile duct, and discusses the symptomatology, which is characteristic. Both his patients were permanently cured by surgical removal of the stone. In 50 out of the 72 cases on record the calculus was a large single stone, forming a cast of the dilated duct. The one illustrated was two inches long by more than three-fourths of an inch in width. It develops like thrombosis in a vein, suggesting, he says, "an actual choledochal biliary thrombosis." When the obstruction from the stone induces expulsive colic and fever from retention of bile, the pancreas is liable to become inflamed in turn. It reacts with progressive sclerosis or more acute lesions. Chauffard urges the necessity for diagnosing these cases of lithiasis of the bile duct before it reaches this stage. Prompt removal of the stone without wasting time in medical measures will save the patient these disturbances and dangers. The icterus in his two cases was very slight and intermittent, and the stools were only occasionally clay-colored. These fluctuations are due to the conditions of the walls of the duct. If they are swollen with inflammation there is more or less complete obstruction, but when they are not inflamed they stretch and allow bile to trickle through. The pain is not characteristic, but localized tenderness in what he calls the "pancreas-choledochus zone" may be instructive. This zone is the space between a line perpendicular to the umbilicus and a second line drawn from the umbilicus at an angle of 45 degrees to the first line. The zone in this angle does not reach quite to the umbilicus below and does not extend for more than 9 cm. along the slanting line. Experiments on the cadaver have shown that this zone corresponds to the head of the pancreas, traversed or skirted by the bile duct. The gall bladder is above and to the right, the distance between the gall bladder region and the zone being the length of the bile duct. Systematic exploration of this zone will generally reveal a point of extreme tenderness, referable either to the bile duct or to the pancreas. The fever in case of lithiasis of the bile duct occurs in spurts of high temperature, brief but frequent, suggesting the fever of icterus, and paralleled by hyperleucocytosis. His patient had lost 36 kilos (nearly 80 pounds) in ten months, suggesting the possibility of cancer. This decline in weight is probably due to the involvement of the pancreas in the process, interfering with pancreatic digestion. Secondary pancreatitis is especially liable to occur in lithiasis of the bile duct. This involvement of the pancreas can be determined by examination of the feces, revealing the lack of utilization of the fats ingested.

24. **The Systolic Souffle of Pure Aortic Insufficiency.**—Couto's article is based on personal experience and study of what has been written on the subject in Italy, Russia, South America and elsewhere. He argues that none of the explanations to date are correct, and gives diagrams which explain his conception of the phenomenon. He regards the two souffles heard in auscultation, one presystolic and the other diastolic, as the essential characteristics of pure aortic insufficiency. The organic cause of the first of these souffles resides in the alteration itself, which prevents the perfect closure of the semilunar valves during diastole. This presystolic souffle is due to the passage of a retrograde wave from the aorta into the ventricle, through the orifice of the aortic, during the occlusive phase of the systole.

Archiv f. Gynäkologie, Berlin.

25 (LXXVI, No. 3.) *Ueber das Zusammentreffen von Gravidität mit appendicitis und Typhlitis. H. Füth (Leipsic).
26 Ueber die Verlagerung des Coecums während der Gravidität in Rücksicht auf das Zusammentreffen derselben mit Appendicitis (displacement of cecum in pregnancy, in regard to coincidence of latter with appendicitis). Id.
27 *Zur Aufklärung der Eklampsie. Zweifel.
28 Histologisches über das endometrium hypoplastischer Uteri. O. Schaeffer.
29 *Zur Therapie der Uterus-Ruptur. J. Eversmann.
30 *Bakteriologische Verhältnisse in weiblichen GenitalSekreten. H. Natvig (Helsingfors).

25. **Pregnancy Plus Appendicitis.**—Füth has had occasion to observe 5 cases of this kind. From this experience and from study of the literature he concludes that appendicitis is a serious complication of pregnancy, especially on account of the tendency to recurrence. Recurrence was noted in 21 per cent. of the cases recorded. Monod and others advise removal of the appendix, as a rule, even when there are no symptoms, at the third or fourth month of pregnancy if the patient has ever had appendicitis. In case of incipient appendicitis in a pregnant woman, all agree that immediate appendicectomy offers the only chance of cure. An important aid in differentiating appendicitis, he states, is the great difference between the temperature in the axilla and that in the rectum. In one of Füth's patients this difference amounted to from 1.9 to 2.6 Centigrade degrees. The anatomic conditions in pregnancy favor the evacuation through the vagina of an appendicitic abscess in the Douglas pouch. If there is too much danger of interrupting the pregnancy, the abscess can be opened through the rectum.

27. **Eclampsia.**—Zweifel found crystals of zinc paralactate in the urine of 17 eclamptic women. Lactic acid is a constant constituent of the urine in eclampsia. It is probably derived from the meat ingested, and he considers it responsible for the eclampsia. Everything seems to indicate that eclampsia is an acid intoxication. Lactic acid is a product of deficient oxidation. It was found both in the blood and in the urine of his eclamptic patients. Its appearance in the blood or urine is always an indication of morbid conditions. In one of the eclamptic women a large proportion of lactic acid was found in the blood during the attacks, but five hours after the last attack there was no longer a trace of it. In some cases a larger proportion of lactic acid was found in the blood of the fetus than in the mother's blood. Zweifel regards this as an argument in favor of immediate delivery at the first signs of eclampsia. The children, as a rule, do not seem to suffer from the maternal eclampsia. None of the children with lactic acid in the blood was born dead in his experience. The bag of waters should be emptied at once and delivery carried out under chloroform. It should not be forgotten that morphin in experimental research induces the appearance of lactic acid in the urine. Venesection is indicated and saline alkaline infusion (5 gm. salt and 5 gm. sodium bicarbonate to the liter of water) to neutralize the lactic acid in the blood and favor its elimination. Lemonade with sodium or alkaline citrates is also beneficial. The stomach should be emptied before pouring in the lemonade. The tube can be introduced through the nose at need. Diuretics are also useful, 40 drops of a saturated solution of acetum scillæ or the like. He thinks the trouble is due to an excessive consumption of the oxygen in the body by the demands of the growing fetus. To supply oxygen is, therefore, the main indication. The shallow respiration of eclamptics does not allow of adequate intake of oxygen, and to insure deep breathing Zweifel applied electric stimuli (faradic) to the phrenic nerves. This transformed the type of respiration and the oxygen thus abundantly inhaled seemed to have a favorable action on the eclampsia. Restriction of meat during

pregnancy might reduce the formation of lactic acid. A vegetable diet seems more rational on this account. If pregnant women had their urine examined every two weeks for albumin, nephritis might be detected earlier. Some cases of eclampsia, however, develop without preceding albuminuria.

29. **Treatment of Rupture of Uterus.**—Eversmann summarizes the results of his own and others' experience in the statement that tamponing, with a compressing bandage, gives the best results. This should be regarded as the standard treatment under general circumstances. If operative treatment becomes necessary, total removal of the uterus by a laparotomy with suture of the serosa offers the best chances. His statistics embrace 170 cases.

30. **Bacteriology of Female Genital Secretions.**—Natvig's monograph fills 159 pages. It presents evidence in favor of the assumption that streptococci, living as saprophytes in the vulva, are liable to make their way into the uterus and to acquire virulence under these conditions. He knows of no instance of puerperal infection from this source, although he admits its possibility.

Archiv f. Verdauungs-Krankheiten, Boas', Berlin.

Last indexed page 163.

31 (XI, No. 6.) *Determination of Lower Outline of Stomach.—Bestimmung der unteren Magengrenzen, mit bes. Berücksichtigung der Radiographie. Schüle (Freiburg).

32 *Magenschleim (stomach mucus). E. Schütz (Vienna). (Concluded.)

33 *Ueber die Sensibilität im Abdomen und über den MacBurney-schen Druck-Punkt. G. Kelling (Dresden).

34 *Zur Kenntnis der Rectum-Carzinome nebst Bemerkungen zur Früh-Diagnose. I. Boas.

35 Comparison of Sedentary and Active Occupations in Respect to Effect on the Intestinal Functions.—Einfluss der Körperbewegung auf die Darmfunktion. J. Merzbach (Brooklyn, N. Y.)

31. **Determination of Outlines of Stomach.**—Schüle calls attention to the sources of error in determining the outlines of the stomach by inflation of the empty and percussion of the distended organ. All writers concur in stating that the normal stomach lies entirely above the umbilicus. When the stomach is distended with artificially induced gas it is forced downward, sometimes as much as 2 cm. below its normal outline when the person stands. Another source of error is when the transverse colon lies in front of the stomach. The colon is forced forward as the stomach becomes distended by the formation of gas. Rieder has recently published, in the *Fortschritte a. d. Gebiete der Roentgen-strahlen*, viii, No. 3, a fine collection of radiograms of the stomach and intestines. Schüle's findings confirm them and Rieder's conclusions in every particular. Radiograms in case of not too corpulent persons throw light not only on the topography but also on the motor functions of the stomach to a surprising degree. In conclusion Schüle warns that the repeated giving of bismuth should not be regarded as so innocent a matter as is generally assumed. To date no injury has been reported from its internal administration, but instances are on record of harm from its external use. In his tests he found that the findings of percussion, the patient standing, after a test meal, always coincided with the Roentgen findings.

32. **The Mucus in the Stomach.**—Schütz has been studying the pathologic variations in the secretion of mucus in the stomach. His observations were made one hour after a test breakfast, examining the stomach content obtained by expression. He also examined the rinsing water obtained after the stomach has been emptied and rinsed clean, and the stomach contents obtained by rinsing and expression of the fasting stomach. He tabulates the findings in 110 patients with various stomach affections on whom these three tests were made. In 52 per cent. of the cases the mucus was found in excessive amounts, while in the rest it was scanty or lacking altogether. The latter group included 9 cases of achylia, 8 of motor insufficiency, 7 of gastralgia, 9 of gastric neurosis, 4 of anacidity, 3 of hyperacidity, 1 of ectasia, 2 of chronic catarrh and 1 each of ulcer, subacidity, cicatricial stenosis of the pylorus, gastrosuccborrhea, obstipation, nephrolithiasis, acute dyspepsia and icterus. In 28 cases of chronic gastric catarrh the mucus was found excessive at all three tests, as also in 6 cases of cancer of the stomach, in 1 of cancer of the liver and in 1 of ulcer. The mucus was found excessive in the second and third tests alone in 10 patients, including 1 case of ectasia, 2 of motor insufficiency, 1 of gastrosuccorrhea, 1 of chronic nephritis with dyspepsia, and in 3 of gastric neurosis. The mucus was found excessive only in the second test in 2 cases of motor insufficiency and in 1 of a gastric neurosis, and only in the third test in 7 cases, including 2 of subacidity and 1 each of subacidity, enteroptosis, hyperacidity, ulcer, neurosis and cicatricial stenosis. He reviews in detail the groups of these various affections, and believes that his research will establish the conception of catarrh of the stomach on a more solid foundation, although he does not attempt to draw any general conclusions at present.

33. **Sensibility of Abdomen.**—Kelling summarizes the conclusions of his extensive study of the subject as follows: It is necessary to investigate much more closely than has yet been done the conditions of sensibility in the region of the cecum. The sensibility of the skin must be distinguished from the tender points in the musculature and the latter from the tender points in the sacral hollow of the pelvis, and each and all should be compared with the symmetrical points on the other side of the abdomen. The tenderness at McBurney's point is purely nervous. At this point the nerves of the appendix correspond with those of the abdominal wall above, so that the condition of irritation in the sympathetic plexus of the region of the cecum induces hyperesthesia in the intercostal nerves and also at the places where the cutaneous nerves pass through the fascia. There is another tender spot in the sacral hollow of the pelvis, the ileocolic plexus, which may be hypersensitive and tender in case of essential irritative conditions, such as hysteria, neurasthenia, etc., or by radiation, as in case of appendicitis, colitis, cholelithiasis, etc. Hence tenderness in this region can not alone serve to diagnose appendicitis. Palpable anatomic findings are the only reliable basis for the diagnosis. For the differential diagnosis between appendicitis and cholecystitis, even icterus is not decisive except when it occurs without fever. Bacteria may be carried from the appendix into the liver and thence into the bile, and may thus induce cholangitis and cholecystitis. This is why icterus is not a rare accompaniment of appendicitis. It also explains the frequent combination of appendicitis and of subsequent cholelithiasis. When there is a striking lack of tenderness in the pathologic resistance and its vicinity, it is safe to assume that the sensation of pain, if it exists, is falsely located, and that it should be referred to the more centripetal sympathetic plexus or to the skin, and in the latter event to the symmetrical point opposite. In attacks suggesting appendicitis and requiring operation, special attention should be paid to the gall-bladder, particularly when the findings in the appendix are comparatively trifling. On the other hand, the appendix should always be investigated during an operation for gallstones. In cases suggesting appendicitis or a gallstone affection, without decided palpable findings, the diagnosis should be left in suspense, but the treatment should be that of the more serious affection, namely, of appendicitis. The article is illustrated and the various points of special sensitiveness in the abdomen are described and the anatomic conditions explained.

34. **Early Diagnosis of Rectal Cancer.**—Boas addresses this article to the general practitioner, expatiating on the latter's responsibility for the disaster sure to follow the overlooking of malignant disease in the rectum until the time for operation has passed. In 80 per cent. of his 83 cases of carcinoma of the rectum the growth was inoperable when first seen. In several cases some physician had made a supposed careful examination of the rectum and yet had failed to discover it. In other cases the physician had detected the growth, but had not insisted on immediate operation, and the patients had wavered long before consenting to an operation, possibly wasting time with quacks in the interim. Boas does not have much hope of effectually influencing the public by newspaper articles, lectures, etc., along the lines of Winter's anticancer campaign (mentioned in the news columns of the last volume). When people are well they pay slight attention to warnings or admonitions and soon forget them. He suggests as a more effectual measure that physicians should have printed on the backs of their prescrip-

tions a series of warnings in regard to the first signs of cancer, and what should be done, similar to Winter's warning in regard to cancer of the uterus. Patients getting the prescriptions would read the warnings on the back. When people need prescriptions their minds are turned to thoughts regarding disease, consequently the warnings would make more impression than at other times and places. He says that if a hundred physicians would take this step, others would soon follow, and the constant reiteration of the warnings at an impressionable period could not fail to impress the public in time. Cancer of the rectum occurs, according to his experience, in about a third as many cases as cancer of the stomach (245), and nearly as often as cancer of the esophagus (100). As the food has been digested and assimilated in the upper part of the digestive tract, persons with cancer of the rectum do not grow thin and weak, but may present a blooming aspect and gain in weight. Habitual constipation was noted in the history of 15 and hemorrhoids in 22 of his patients. The classic triad of symptoms, tenesmus, obstruction or diarrhea and blood and mucus in the stools, are not observed at first in every case. In some of his patients the first symptoms were violent colic pains recurring at intervals in the abdomen or stomach, and in other cases pains in the region of the sacrum or coccyx. Such cases suggest the necessity for examination of the rectum, even when the symptoms point to other organs. In certain cases bleeding from the rectum was the first symptom to attract attention. The bleeding simulated hemorrhoidal hemorrhages, especially as it so frequently affects persons already subject to hemorrhoids. The same applies to tenesmus, which is supposed to be frequent in case of hemorrhoids. His experience has been rather against this assumption. Tenesmus with hemorrhoids is more intermittent than that accompanying cancer of the rectum. In every case of tenesmus it is the physician's first duty to determine its cause. In at least 25 out of his total of 83 cases the tenesmus was not obesrved until from one to twenty-four months after the appearance of other symptoms, thus being a tardy symptom in two-thirds of the cases. The course of rectal cancer may be long or short. In 24 cases in which the first symptoms had been noted only from three to twelve weeks before, he found 6 in which the growth was already inoperable, and only 2 of the patients survived the operation for any length of time. On the other hand, he encountered cases in which the symptoms dated from months and even two or three years before, and yet the growth could be successfully removed. Five of his 83 cases of rectal cancer were in diabetics, which he regards as more than a mere coincidence. In diagnosing this condition he calls attention to the odor of the underclothing in cases of rectal cancer, and it may be possible to detect spots on the underclothing with the same fetid, not fecal, odor. Another important sign is the stools. The patients complain of several watery discharges during the day, sometimes containing hard lumps of feces. In case of ordinary enteritis or nervous diarrhea, the amount passed is comparatively large, but with rectal cancer the amounts are remarkably small, mere spurts. Boas never fails to inquire as to the character of the passages in every case of diarrhea that he encounters. Another diagnostic point is that the diarrhea in these cases persists unmodified by dietetic or vigorous medicinal measures. When he learns this fact in regard to a patient, he never wastes a moment before examining the rectum for cancer. Still another sign of this "false diarrhea" is that the intestines are not empty, but contain lumps of feces, especially in the descending colon and the sigmoid flexure. This confirms the diagnosis of primary obstipation. Simple chronic diarrhea empties the intestines, but does not cause an increase in the indican in the urine. In the false diarrhea from obstruction, indican is found abundantly. Examination of the urine may therefore prove suggestive. Even if nothing suspicious can be found in the rectum after digital and ocular examination, the search should not be abandoned until after the sigmoid flexure has been investigated also. The prognosis may vary with the variety of the cancer, and hence microscopic examination is advisable. If the growth is inoperable, palliative treatment gives more gratifying results in these cases than with cancer elsewhere. The physician should aim to keep the general health good, to keep the passage open and to avoid everything that might irritate the carcinoma. Ordinary diet, including beans, peas, etc., is appropriate; only irritating hulls, skins, etc., must be avoided, the articles of food being prepared universally in the form of purées. Sugar, acids, salts, fats and oils should predominate as in any anti-constipation diet. Mild laxatives are also required. The tenesmus must be kept under control by these measures, with opiates as the last resort. He refers to one patient kept in comparative health for four years by these means.

Deutsche medizinische Wochenschrift, Berlin and Leipsic.

36 (XXXI, No. 51, December 21.) *Therapie der Psoriasis. E. v. Düring.
37 Ueber Typhus-Kulturen die sich den Immunitäts-Reaktionen gegenüber atypisch verhalten. A. Besserer and J. Jaffe.
38 Die Methylgrün-Pyronin-Methode für elektive Färbung der Bakterien im Schnitt (staining of bacteria in sections). Saathoff.
39 Ueber die Anwendung von Neutuberculin (Bacillenemulsion). Krause.
40 Die Priorität in der Tuberculin-Herstellung und Anwendung. C. Spengler (Davos).
41 Ueber die Anwendung der Bassinischen und Kocherschen Operation in der Leistenbruchtherapie (inguinal hernia). Baratynski.
42 Advantages of Dry, Iodized Catgut.—Trockenes Iod-Catgut. Herhold.
43 *Ueber Goldscheiders Methode der Herz-Perkussion (Orthoperkussion). H. Curschmann and Schlayer (Concluded).
44 Apparatus for Clinical Tests of Taste.—Zur Untersuchung des Geschmackssinnes für klinische Zwecke. W. Sternberg.
45 New Inventions of Interest to Physicians.—Erfindungen aus dem Gebiete der Medizin und der öffentlichen Gesundheitspflege. G. Justi.
46 *Dangers from Cheap Metal Spoons.—Anfechtbares Essgeschirr. H. Steinheil.
47 With the German Red Cross in Manchuria.—Das Lazarett der Deutschen Vereine vom Roten Kreuz in Charbin. A. Brentano. (Concluded.)
48 (No. 52.) *Die Behandlung der Herz-Neurosen (of heart). T. Rumpf (Bonn).
49 Serum Treatment of Scarlet Fever.—Serum-Behandlung des Scharlach. B. Schick (Escherich's clinic, Vienna).
50 Negative Influence of Chlorin on Utilization of Lime in Infants.—Einfluss des Chlors auf die Kalkausnützung beim Säugling. A. Schütz.
51 Ueber Primär-Effekt am Lid mit Demonstration von Spirochæten. Kowalewski.
52 Invaliden-Versicherung und Tuberculose (insurance against sickness). M. Wagner. (See news items, page 442.)
53 Statistics in Regard to Physicians in Germany.—Die Aerzte Deutschlands im Jahre 1905. G. Heimann.

36. **Treatment of Psoriasis.**—Düring thinks that not enough attention is paid to hydrotherapy in the treatment of psoriasis, especially sweat baths with dry heat. Douches, alternating hot water for two minutes and then cold water for two seconds, are another useful measure. The sensitiveness of the skin must be carefully determined for each individual case to gauge treatment. As a rule, he prefers oil of cade to chrysarobin and pyrogallol. The patients should be moderate in the use of alcohol, coffee and tobacco, and should avoid a "too nourishing" diet in general as tending to favor eruptions. Internal treatment of psoriasis he considers uncertain, useless and even harmful in some instances. Arsenic sometimes aggravates the symptoms or induces others. The salicylates and iodin internally have proved ineffectual in his experience, although he acquired the impression in some cases that potassium iodid internally promoted the action of external medication. He warns against thyroid treatment. In regard to prognosis he is quite pessimistic. The treatment which may cure one patient may have no effect on another; in a third, the old eruption may subside, but another follow close, and in a fourth it may transform a torpid process without subjective symptoms into an annoying and generalized affection, disturbing the general health.

43. **Ortho-percussion.**—Curschmann has found Goldscheider's technic of ortho-percussion extremely reliable, the results coinciding invariably with the findings of ortho-radiography. He has the patient recline and percusses during shallow respiration. The results have proved so reliable that he recommends this method of percussion as a valuable aid in diagnosis. In combination with the determination of the absolute dullness it allows a more complete oversight of the heart and main arteries than has hitherto been attainable in any way.

46. **Dangers from Cheap Metal Spoons.**—Steinheil gives an illustration of five spoons which he found used daily in cooking. The cheap alloy of which the spoons was made easily crumbled or melted off, so that fragments of the spoons dropped into the food and were probably eaten with it.

48. **Cardiac Neuroses.**—In this clinical lecture Rumpf describes the various neuroses affecting the heart and the means of relieving them. In all forms the entire mode of life must be regulated; eating, drinking, sleep, exercise and gymnastics as well as mental activity must all be supervised. Injurious influences in the daily life must be eliminated after careful study of the anamnesis. He thinks a moderate altitude is better for heart neuroses than the seashore. In attacks of tachycardia, deep breathing while reclining may be found useful, both in curing and in preventing an attack. Ice to the heart has also done good service in some cases of heart neurosis on a hysteric or neurasthenic basis. One group of heart neuroses which prove especially obstinate to treatment are those that follow overexertion or trauma, especially excess in sports. The most essential symptom in this class is the great acceleration of the heart action at the slightest exertion, perhaps at the slightest movement. There is also weakness, with pallor and sometimes loss of weight. These cases require rest in bed for weeks or months, with care as to nourishment, avoidance of alcohol, coffee, tea and tobacco. Carbonated saline baths and cautious respiratory exercises while reclining, vibration massage and electricity may be tried. The psychic treatment is of great importance. The trouble may last for months, if not for years, and frequently entails arteriosclerosis. There may have been dilatation of the heart, but it has subsided by the time the physician sees the patient, and foci of degeneration may have been left which escape diagnosis. Sometimes a heart neurosis of this kind follows an injury of the skull. In several cases of this kind he has observed consecutive arteriosclerosis develop in a few years in young persons who never had used tobacco or alcohol to excess. So long as no organic affection can be detected in these traumatic cases they must be classed as neuroses. Cardiac neuroses may be induced from the digestive tract by direct mechanical influences, and further by reflex phenomena from the most varied points in the abdomen. The false angina pectoris and tachycardia that may result should be treated by emptying the stomach and intestines. Lavage of the stomach will relieve or possibly a glass of warm water in the morning before eating, followed by shaking the stomach through the abdominal wall. Drinking tepid water and putting the finger in the throat will induce a desire to vomit, which empties the stomach as the pylorus opens at the same time. The diet should be regulated. Coffee, especially after meals, is liable to interfere with digestion, prolonging the stay of the food in the stomach and favoring abnormal putrefaction. Tea may be allowed, but not in sufficient amounts to distend the stomach. Another form of neurosis is observed in obese patients whose weight has been rapidly reduced, allowing undue movability of the heart.

Wiener klinische Wochenschrift, Vienna.

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54 (XVIII, No. 37.) Ueber das konstante Vorkommen der Spirochæta pallida im syphilitischen Gewebe bei Menschen und Affen (in man and monkeys). R. Kraus and A. Prantschoff.
55 Ueber Komplikationen der Uterus-Myome speziell über Stieltorsion mit schwerer innerer Blutung. R. v. Steinbüchel.
56 (No. 38.) Der klimatische Kur-Ort Meran (health resort). E. Rochelt.
57 *Zur Behandlung des Inoperablen Uterus-Karzinoms. R. Chrobak.
58 Zur Aetiologie der Tetanie. F. Chvostek.
59 Zur Frage der Kontinenz nach sakraler Rektum-Exstirpation. v. Eiselsberg.
60 *Schädeldefekt und Epilepsie (from defect in skull). A. Fraenkel.
61 Ueber kleine Rupturen an der Corneo-Skleralgrenze (junction). E. Fuchs.
62 Technic of Examining Part of Heart Adjacent to Sternum.—Ueber den Nachweis der dem Sternum anliegenden Herzteile. M. Herz.
63 *Zur Frage der Aetiologie und Pathogenese der epidemischen Genickstarre (cerebrospinal meningitis). A. Weichselbaum.
64 (No. 39.) Zur Frage der Toxinbildung des Cholera-Vibrio. R. Kraus and E. Pribram.
65 *Cholera-Vibrionen ohne Cholera (without cholera). L. J. Prochnik.
66 *Hepatopexie bei Cirrhosis hepatis. P. K. Nikolic.
67 Ueber die Bedeutung der lipoiden Stoffe der roten Blutkörperchen für den Mechanismus der Agglutination (lipoid substance of red corpuscles). E. Lazar.
68 (No. 40.) Zur Färbung von Exsudat-Zellen (staining). N. Jagic.
69 2 Fälle von Meningitis Cerebrospinalis epidemica, nebst einer Reihe von Nasensekret Untersuchungen gesunder Personen J. Horeicka and W. Poledne.
70 Place of Formation of Antibodies.—Zur Frage der Bildungsstätte der Antikörper. R. Kraus and J. Schiffmann.
71 (No. 41.) *Importance of Lymph Glands as Protecting Organs Against Tuberculosis.—Die Bedeutung der Lymphdrüse als Schutz-Organ gegen die Tuberkuloseinfektion. J. Bartel.
72 *Zur Aetiologie, Pathologie und experimentellen Therapie der Syphilis. R. Kraus.
73 Ueber den Cytoryktes luis. L. Waelsch.
74 Ueber die Spezifität der Erythro-Präzipitine. A. Klein.
75 (No. 42.) Ueber experimentelle Therapie der Dysenterie. R. Kraus.
76 Untersuchungen ueber die sekretorischen Vorgänge am weichen Gaumen (soft palate). L. Rethi.
77 Zur Frage der Tuben-Menstruation. R. v. Steinbüchel.
78 Zur Pathologie der Plazentar-Gefässe und des Amnion. J. Hofbauer.
79 Welche Rolle spielen die Lipoide bei der Sublimathämolyse? L. Detre and J. Sellei.
80 Ueber das sogenannte Dysenterie-Aggressin. R. Dörr.
81 (No. 43.) *Zur Pathogenese des "Diabetes insipidus." R. Schmidt.
82 *Zur Symptomatologie der sekundären Parotitis. K. Pichler.
83 (No. 44.) Tuberkulose-Infektion im Säuglingsalter des Meerschweinchens und Kaninchens (in suckling guinea-pigs and rabbits). J. Bartel.
84 Auftreten der Diphtherie im letzten Dezennium und ihre Sterblichkeitsverhältnisse (diphtheria in last decade). K. Zucker (Graz).
85 *Effekt des Diphtherie-Heilserums bei widerholter Erkrankung und Injektion (recurring diphtheria). Id.
86 Zur Prophylaxis bei Diphtheritis. A. Scheiber.
87 Zur Serum-Behandlung des Scharlach. C. Zuppinger.
88 (No. 45.) *Zur etiologischen Therapie der Syphilis. L. Spitzer.
89 Ueber Spirochæten Befunde in syphilitischen und anderen Krankheits-Produkten. M. Oppenheim and O. Sachs.
90 The New "Infant Protection Station" in Vienna.—Schutzstelle des Vereins "Säuglingsschutz."—B. Sperk.
91 *Death from Electric Accidents.—Der Tod durch Elektrizität. S. Jellinek. (Commenced in No. 44.)
92 (No. 46.) Asthma bronchiale. Pieniazek.
93 Toxic Action of Tubercle Bacilli in Guinea-pigs.—Giftwirkung von Tub.-Bazillen beim Meerschweinchen. O. Bail.
94 Erweichung bronchialer Lymph-Drüsen und ihre Folgen (softening of glands). K. Sternberg.
95 Simulation of Defective Vision.—Entlarvung einseitig simulierter Sehschwäche. L. Schmeichler.
96 (No. 47.) Meningitis carzinomatosa. W. Scholz (Graz). Two cases.
97 Spirochæten-Befunde bei Nosocomial-Gangrän in Unterschenkelgeschwüren (leg ulcers). R. Polland (Graz).
98 4 Fälle von Fleck-Typhus (spotted typhus). A. Marcovich (Triest).
99 Ueber interne Urethrotomie. G. Oesterreicher.
100 *Die Bier'sche Stauung in der gynäkologischen Praxis (passive hyperemia). R. Bauer.
101 *Fall von Veronal-Vergiftung (poisoning). J. Geiringer.
102 Active Immunization in Syphilis. R. Kraus (Reply to A. Brandweiner's "Versuche über aktive Immunisierung bei Lues" in No. 45. See paragraph 72 above.)

57. **Treatment of Inoperable Cancer of the Uterus.**—Chrobak remarks that in inoperable cases of cancer of the uterus the condition can be relieved by a partial operation to a greater extent than is generally recognized. He has had a patient gain 77 pounds after a palliative operation on an ovarian cancer. He does not believe in telling the patient that she has malignant disease, preferring to persuade her to submit to an operation, possibly adding that treatment by other measures is not so sure of results and that if intervention be postponed it may come too late. He regards it as a greater satisfaction than the most brilliant operation when he has succeeded in winning the confidence of a cancer patient and has been able to keep her during the entire course of the disease unaware of its true nature and full of hope until death brought release. The physician should strive to ward off injurious influences and should vary the therapeutic measures, keeping hope alive. Curetting and cauterizing the growth will frequently hold it long in check. His experience has confirmed Lomer's to the effect that the results are more favorable when there is fever afterward. There is certainly, he is convinced, a difference in the course of an open and a covered cancer. When he has covered the growth after an operation with a shield of mucosa, local recurrence was tardier than when it was left uncovered. Even when a palliative operation merely promotes cleanliness and rests the patient it is surely worth while. Martin had a patient live 54 months after curetting an inoperable cancer. Gebauer one who lived over five years, and Eyring had one who lived over three years. Chrobak performed 408 such palliative operations in his clinic between 1890 and 1900. In 1903, 7 of the women were still living, 2 after an interval of two or three years, 4 after three or four years and in 1 case of epithelioma of the cervix the patient lived eleven years after the palliative operation. Nine of the patients lived for three years, 4 for three or four, 2 for five or six, 1 for ten

and 1 for eleven years. In his private practice he had a patient survive for five years who required curetting of recurrences several times and was then lost to sight. In another case he curetted, in 1884, a carcinoma of the vaginal portion of the cervix encroaching on the vagina, in a woman of 32. The growth proved to be a soft, unusually vascular cancroid. Hemorrhage recurred a few months later, indicating a new scraping, and a recurring growth was curetted away in 1884. Since that date the growth has healed over completely, the patient is still in perfect health and has married a second time, although sterile in this latter marriage. In another case a carcinoma of the body of the uterus was curetted in 1888; there has been no recurrence to date. He has repeatedly kept patients in good health for six years by curetting at the first recurrence of symptoms, sometimes repeating the procedure eight or ten times on the same patient. These results are possible only in private practice. In the public hospitals the patients seldom return often enough, and if they learn the true nature of their trouble they are liable to resort to swindlers and quacks. He lays great stress on refraining from calling the scraping an "operation." The patient should be told that it is merely a harmless intervention which the family physician or the surgeon will possibly or probably have to repeat several times. The term "operation" frightens the patient too much, and she shrinks from a repetition of an operation. The family should always be fully informed in regard to the circumstances. In curetting he uses a large sharp spoon under general anesthesia, after careful disinfection, proceeding as rapidly as possible on account of the bleeding, which generally ceases when sound tissue is reached. He then takes a small sharp spoon and scrapes out the rest of the cancer in its remotest nooks, supporting the growth with the finger introduced in the rectum. When everything accessible has been scraped away he rinses and sponges the tissues dry and then cauterizes. He has used the actual cautery, but thinks that it does not penetrate into the crevices as well as a fluid caustic. The cancers which remained free from recurrence the longest were all cauterized with crude fuming nitric acid. He applies it on a stick or roll of asbestos, the asbestos fibers forming a brush, or with a cotton-wound stick. He never sprays the fluid, as it is liable to burn the sound skin or the physician's hands. Even the fumes are caustic and must be blown away. The scab is thrown off in two or three weeks, and granulating surface is left, whose healing can be promoted with iodin or silver nitrate solutions. Suspicious points can be treated again with the nitric acid or otherwise. There is always danger during curetting of perforating into the bladder, rectum or peritoneal cavity, and the operation should not be undertaken until visual inspection of the bladder or rectum has shown that there is no extensive cancerous infiltration of the dividing wall. Perforation into the peritoneal cavity is not so dangerous as is generally supposed if it is recognized at once and further intervention suspended. After the cauterization, dry powder scattered in the vagina or applied on gauze will help to dry up the discharge better than attempting to keep the vagina clean by injections of astringents or disinfectants. They tend to keep up the discharge. In his experience the best powder for such local use is a combination of iodoform with tannin or charcoal. In conclusion he urges that in such a case the physician should conquer his personal diffidence and strive to keep the patient in his charge. In changing her physician she is liable to learn the true nature of her trouble, which may nullify all the previous efforts to save the doomed woman from despair.

60. **Bullet Wound of Skull and Epilepsy.**—A young man witnessed the burning of his parents and in his grief seized a revolver and shot himself in the head. Splinters of bone were removed on several occasions afterward, as, symptoms of transient paralysis and epilepsy developed, but two years after the accident a box fell from a height on the defect in the skull and severe chronic cortical epilepsy developed at once. The two places where there were gaps in the skull were closed with celluloid plates and the epilepsy vanished. The cure has been permanent for eight years to date.

63. **Epidemic Cerebrospinal Meningitis.** — Weichselbaum states that during an epidemic there is always a possibility that a few cases may be encountered which do not belong to the epidemic class. It seems to be an established fact, however, that the great or protracted epidemics of cerebrospinal meningitis are always due to the *Diplococcus intracellularis.*

65. **Cholera Vibrios Without Cholera.**—The report of examination of cadavers of Mecca pilgrims has already been mentioned in these columns. In 6 out of 38 in which dysentery had been the cause of death, Prochnik found cholera vibrios without any evidences of cholera, past or present. Although harboring virulent cholera bacilli, the individuals had not become infected nor infected others, as not a case of cholera was known throughout the Mecca region during the season. The article is an interesting account by a medical man of the great Mecca pilgrimages. Prochnik is consul for the region and has charge of the sanitary regulations, with offices at Djeddah.

66. **Fixation of Liver on Account of Cirrhosis.**—Nikolic describes a case of alcoholic cirrhosis of the liver in which hepatopexy was done by Czerny. The patient succumbed almost immediately to hemorrhage from the stomach. The pressure of the heavy overhanging liver on the stomach had interfered with its circulation and compressed the pylorus. A patch of necrosis resulted with erosion of the gastroduodenal artery. A protruding portion of the cirrhotic liver lay over the patch of necrosis and acted like a plug for the eroded vessel. When the heavy liver was raised up and fastened to the abdominal wall this removed the stopper over the injured vessel and also removed the obstacle to the circulation. The result was the fatal hematemesis. In another case the postoperative diagnosis was round ulcer of the stomach, with incipient cirrhosis of the liver. Treatment was by posterior gastroenterostomy and hepatopexy, and the patient made a smooth recovery and was soon dismissed.

71. **Lymph Gland as Protecting Organ Against Tuberculosis.**—Bartel has been conducting researches to learn more about the incipient stages of tuberculosis infection and has arrived at various conclusions on the way. Among them is one to the effect that he can not be mistaken in assuming that the lymphocyte plays the principal part in the fight with the tubercle bacillus. The normal lymphocytes of an animal comparatively resistant to tuberculosis (sheep) are able to make virulent tubercle bacilli avirulent, which can then be injected into guinea-pigs without resulting infection. Long contact is required in the test tubes before the virulence is thus abolished, but this corresponds to the long period of incubation or latency of tuberculosis infection in general. The avirulent tubercle bacilli after contact with the lymphocytes lose their destructive and chemotactic properties, also the power of proliferating, and he believes that they will prove an effectual vaccine material, inducing active immunity. He is convinced also that the lymphocyte-producing organs of animals thus actively immunized will elaborate a substance which will have an attenuating and inhibiting action on tuberculous affections in other animals. Further researches in this line are now under way.

72. **Experimental Syphilis.**—Kraus has been experimenting with syphilis in monkeys, treating it according to the technic of the Pasteur treatment of hydrophobia. His experiences have been limited, but the impressions derived were decidedly favorable.

81. **Diabetes Insipidus.**—Schmidt has been impressed with the constancy of constipation in the previous history of certain patients with diabetes insipidus and the remarkable subsidence of the polyuria when podophyllin was given. Defective skin functioning was another constant feature of the clinical picture. The artificial hyperemia induced by the drug in the intestines diverts the blood from the congested kidneys and gives the atonic kidney vessels a chance to recover their tonus. Sweat baths may have the same kind of revulsive effect. Treatment of the cases of polyuria accompanied by diminished cutaneous function and constipation, should be directed to reducing the congestion in the kidneys resulting from loss of tone by the capillaries of the organ. Reduction of the intake of fluids will help, as also laxatives and diaphoretics. He prescribes 1 gm. (about 15 grains) of podophyllin in 40 pills,

ordering one or two pills a day, with physical measures to promote action of the skin, warm clothing, a southern climate, etc. He describes 3 cases in detail and reviews the literature.

82. **Secondary Parotitis.**—Pichler's 4 cases include 3 secondary to pneumonia and 1 following typhoid.

85. **Recurring Diphtheria.**—Zucker states that out of 2,323 diphtheria patients treated with serum, 21 returned after an interval of from one month to over five years with a second attack and 3 with a third. The course of the recurring disease was not essentially different from that of the first attack, and no difference could be observed in the effect of the serum treatment.

88. **Etiologic Treatment of Syphilis.**—Spitzer has applied on 15 syphilitic patients the technic advocated by Kraus above, treating them with a suspension of tissue from syphilitic sclerosis, diluted to .5 and 5 per cent. The technic was the same as for Pasteur injections in hydrophobia. Between eleven and twenty injections were made; 7 of the patients were apparently uninfluenced by them. Three others have presented no further manifestations of the syphilis during the ten and twelve months they have been under observation, and in the remainder the manifestations were very tardy in developing and were very slight. The injections were made from two to four weeks after infection. No inconveniences of any kind were observed from them, and the inguinal buboes in all subsided with striking promptness.

91. **Death from Electric Accidents.**—Jellinek concludes his monograph with the assertion that death from electric accidents in the majority of cases is merely apparent death. The menacing symptoms are frequently of a transient nature, tending to improvement, the vital functions in many cases being merely transiently disturbed or inhibited, and recovering if efforts at resuscitation are kept up long enough. The electricity has a double action. If the material changes are not too pronounced, the psychic phenomena may right themselves in time.

100. **Passive Hyperemia in Gynecology.**—Bauer gives an illustration of the speculum tube he uses for inducing passive hyperemia in the vagina. In one case of amenorrhea of two years' duration he succeeded in re-establishing menstruation by five applications of the speculum for five minutes at a time in the course of five days. A number of other patients were not benefited. The best results were obtained in chronic metritis. In one case an attempt to use the speculum before inducing abortion brought on an unusually severe hemorrhage.

101. **Veronal Poisoning.**—Geiringer states that since Kress published in the *Neue Therapie* for September, 1905, a list of cases of acute and chronic veronal intoxication he has had occasion to observe the following case: A woman of 30, who had twice been under treatment for neurasthenia, consulted her physician on account of a felon and asked for a hypnotic to enable her to sleep. He prescribed 10 gm. (about 152 grains) of veronal (diethylmalonylurea) in 20 powders, with instructions to take one powder on retiring. As she felt no effect from one powder, she took eight more, thus ingesting 4.5 gm. (about 68 grains) of the drug, and slept till morning. She awoke with nausea, vomiting, headache, somnolence and staggering gait, subnormal temperature, contracted pupils and sluggish pupil reaction. Twelve hours after taking the drug her stomach was washed out with a solution of 5 gm. of tannin in 5 liters of water (about 15 grains to the quart), the intestines were flushed high with water, and caffein was injected and black coffee given as for morphin poisoning. Vomiting continued during the day, with some somnolence, but the patient rapidly recovered and was dismissed cured the fourth day. As at least twelve hours had elapsed before treatment was commenced, the veronal must have been very slowly absorbed. It is not very soluble in water. [In Hoppe's case of chronic veronal poisoning, reported in society proceedings in the *Deuts. med. Wochft.* for June 15, and in the *Therap. Monatsh.* for August, 1905, a man, aged 26 years, under treatment for inebriety, was given occasionally 0.5 gm. (7.5 grians) of veronal to relieve insomnia. About seven weeks later the patient began to sleep so soundly until midday that it was difficult to awaken him. He resorted to the use of 8 to 10 cups of strong coffee and tobacco smoking to keep active during the afternoon, and exhibited characteristics of drunkenness. It was ascertained that he had been taking daily from 2 to 3 gm. (31 to 46 grains) of veronal. In the discussion of this case Dr. Hoeftmann referred to 2 cases of the same form of chronic poisoning. One patient was a neurotic and showed marked psychic disturbance after comparatively moderate doses of the drug; among other symptoms, the speech was like that of a drunken man. The second patient, a former morphin-eater, used daily from 2 to 3 gm. (31 to 46 grains) of the veronal and showed marked excitement, with suicidal tendency, and the same peculiar speech. The diagnosis in this case was made principally from the appearance of drunkenness, especially in regard to the speech. Hoeftman remarked that the condition was worse than that of the previous morphin addiction in so far as there were no free intervals.—ED.]

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

MATERIA MEDICA, PHARMACY AND THERAPEUTICS, Including the Physiological Action of Drugs, the Special Therapeutics of Disease, Official and Practical Pharmacy, Minute Directions for Prescription writing and Avoiding Incompatibility, also the Antidotal and Antagonistic Treatment of Poisoning. By S. O. L. Potter, A.M., M.D., M.R.C.P. Tenth Edition, Revised and in greater part Rewritten. Cloth. Pp. 914. Price, $5.00 net. Philadelphia: P. Blakiston's Son & Co., 1906.

AN ATLAS OF HUMAN ANATOMY. For Students and Physicians. By C. Toldt, M.D., assisted by A. D. Rosa, M.D. Translated from the Third German Edition and adapted to English and American and International Terminology by M. E. Paul, M.D., M.R.C.S., L.R.C.P., Sixth Section. G, Neurology; H, the Organs of the Senses. Cloth. Pp. 985. Price, $4.75. New York: Rebman Company, 1904.

SQUIBB'S MATERIA MEDICA. A Complete Alphabetical List of all the Squibb products, embracing the articles in the U. S. Pharmacopeia (8th revision), and the National Formulary, together with non-official Chemicals, Pharmaceuticals and Newer Remedies in general use, 1906 edition. Part II. Cloth. Pp. 394. New York: E. R. Squibb & Sons.

THE PRACTICE OF MEDICINE. A Text-book for Practitioners and Students, with Special Reference to Diagnosis and Treatment. By J. Tyson, M.D. Fourth Edition, Revised and Enlarged. 240 Illustrations, including colored plates. Cloth. Pp. 1305. Price $5.50 net. Philadelphia: P. Blakiston's Son & Co., 1906.

I. BIRDS FROM MINDORO AND SMALL ADJACENT ISLANDS. II. NOTES ON THREE RARE LUZON BIRDS. By R. C. McGregor. Publication of Department of the Interior Bureau of Government Laboratories. No. 34. October, 1905. Paper. Pp. 31. Manila: Bureau of Public Printing, 1905.

TRANSACTIONS OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION. Thirty-eighth Annual Session held at Jackson, April 19-21, 1905, with Report on Medical Topics, Roll of Members, Constitution and By-laws. Cloth. Pp. 230. Mississippi: Journal of the Mississippi State Medical Association.

SURGICAL TREATMENT OF CHRONIC SUPPURATION OF THE MIDDLE EAR AND MASTOID. By S. Oppenheimer, M.D. Illustrated by 46 half-tone Plates, containing 64 figures and 27 key plates, etc. Cloth. Pp. 425. Price, $6.00. Philadelphia: P. Blakiston's Son & Co., 1906.

RELATION OF PUBLIC SCHOOL TEACHERS TO CORRECTIVE GYMNASTICS. By G. B. Affleck, Director of Physical Training State Normal School, Cedar Falls, Iowa. Paper. Pp. 16. Price, 10c. Boston: Published by the American Gymnasia Co.

PROCEEDINGS OF THE CONNECTICUT MEDICAL SOCIETY, 1905. One Hundred and Thirteenth Annual Convention held at Hartford, May 24-25. Published by the Society. Cloth. Pp. 588. Bridgeport, Conn.: Press of the Farmer Pub. Co., 1905.

TRANSACTIONS OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA. (The State Board of Health) Organized, 1847.—Meeting of 1905; Montgomery, April 19-22. Cloth. Pp. 587. Montgomery, Ala.: Brown Printing Co., 1905.

TWENTY-THIRD ANNUAL REPORT of the State Board of Health of Indiana, for the Fiscal Year ending Oct. 31, 1904, and Statistical Year Ending Dec. 31, 1904. Cloth. Pp. 282. Indianapolis: W. B. Burford, 1905.

PATENT FOODS AND PATENT MEDICINES: Two Lectures by R. Hutchison, M.D., F.R.C.P. Second edition. Paper. Pp. 47. Price 1s. net. London: J. Bale, Sons and Danielsson, Ltd., 1906.

ADJUSTER'S MANUAL for the Settlement of Accident and Health Claims. By C. H. Harbaugh, M.D. Flexible Leather. Pp. 304. Price, $2.00. New York: The Spectator Company.

A MANUAL OF PHARMACY for Medical Students. By M. F. De Lorme, M.D., Ph.G. Cloth. Pp. 206. Price, $1.00 net. New York: The John C. Lindsay Co., 1905.

TRANSACTIONS OF THE LACKAWANNA COUNTY MEDICAL SOCIETY. Vol. I. Scranton, Pennsylvania: J. M. Wainwright, Editor, 1905.